DOCUMENT RESUME

ED 075 628 VT 019 938

AUTHOR	Maunder, Addison, H.
TITLE	Agricultural Extension. A Reference Manual.
INSTITUTION	United Nations Food and Agriculture Organization, Rome (Italy).
PUB DATE	72
NOTE	374p.
EDRS PRICE	MF-$0.65 HC-$13.16
DESCRIPTORS	*Agricultural Education; Agricultural Production; Developing Nations; Educational Administration; Extension Agents; *Extension Education; Home Economics Education; International Programs; Program Development; Rural Development; *Rural Extension; *Rural Youth; Teaching Methods

ABSTRACT

The basic philosophy of agricultural extension was established in the more highly developed countries over the past century. Newly formed nations, the rural population of which formerly maintained a subsistence agriculture with limited industry, found it essential to establish a better-balanced economy. This led to a variety of rural services and institutions, including agricultural extension service. Although the basic principles have evolved mostly in the more advanced countries, much of the material included in this publication was prepared by experts working in the developing countries and found to be effective there. Contents include sections on the meaning of extension, extension programs, extension teaching, extension administration and operation, international cooperation and relations, and a bibliography. The primary audience to which this publication is directed is the professional field extension worker and supporting staff of specialists and administrators responsible for the effective operation of extension work in each country. Personnel in departments of extension education may also find it of value in the preservice training of future extension workers. In addition, government officials responsible for national economic and social policy may obtain a clearer understanding of the role of agricultural extension in national development. (MF)

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AGRICULTURAL EXTENSION

a reference manual

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AGRICULTURAL EXTENSION

A Reference Manual

Addison H. Maunder, Author-Editor

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome, 1972

FOREWORD

In issuing this document, FAO expresses its appreciation to Addison H. Maunder for the able way in which he has assembled a wide range of material on extension and rural youth, and also contributed the results of his own experience in a number of countries, particularly the United States.

Rapid technological advances and the problem of food supplies in relation to the world's growing population make it certain that extension will be a "growth industry" in the years ahead. It is hoped that this manual will prove of value to those responsible for organizing extension services; to students of agriculture for whom an understanding of the purposes and procedures of extension will help to achieve the much needed coordination of official services to farmers; and to the practitioners of this highly important activity contributing to rural development.

For a variety of reasons, there has been a delay between the preparation and publication of this document, and some of the factual information (e.g. curricula for training institutes) may have undergone changes; these could usefully be checked by intending participants in training courses.

* * * * * * *

In respect and appreciation of one who has dedicated himself to the guidance, spirit and leadership of extension development for helping rural people everywhere, this publication is dedicated to M.L. WILSON

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INTRODUCTION

The period following World War II has seen the development on the part of governments of a recognition of the need for agricultural extension or advisory services. Previously such services had been limited mainly to the more highly developed countries. Food shortages during the war emphasized the need for increased production. Populations of many countries expanded faster than food supplies in the post-war period. With improved communication, rural families were no longer satisfied with bare subsistence in good years interspersed with periods of famine. They demanded of their governments assistance in obtaining economic and social equality with more fortunate segments of the populations. Newly formed nations, the rural population of which formerly maintained a subsistence agriculture with limited industry, found it essential to establish a better balanced economy. Increased and more efficient domestic food production was required to supply the rapidly growing cities and to save or gain the foreign exchange necessary for economic development. And finally, the whole philosophy of government changed from one of exploitation of the masses of rural people to one of recognition of a responsibility for their welfare. These and many other factors led to the establishment of a variety of rural services and institutions, including agricultural extension services.

The basic philosophy of agricultural extension as well as methods of operation have been established in the more highly developed countries over the past century. Much information has been published on this subject. Although the basic principles of extension education have gained acceptance throughout the world, their application in effective programs must necessarily vary with the circumstance in each country and with the situation in each local community. The purpose of the Food and Agriculture Organization in arranging for this publication is to draw together those basic principles with world-wide application to the development of agricultural extension services; to show how they may be applied under varying circumstances; and to explain some techniques and methods of organization and operation which have proved effective in a variety of economic, social and political situations.

The author recognizes the dangers inherent in offering specific recommendations for the organization and operation of agricultural extension services. Certain organizational structures, although sound and desirable, may not be feasible in a given country due to the existing overall structure of government. It may not be possible to adopt a desirable staffing pattern at this time because of shortage of trained personnel or lack of financial support. Community organization for extension work or educational methods suggested may not be compatible with tradition or the mores of the society. Therefore, the reader is urged to work out his own application of useful principles adapting the method to existing circumstances.

The primary audience to which this publication is directed is the professional, operating field extension worker and the supporting staff of technical specialists, supervisors and administrators responsible for the effective operation of extension work in each country. Secondly, personnel of departments of extension education may find it of value in the pre-service training of future extension workers. And finally, it is hoped that government officials who are responsible for national economic and social policy will find this book useful in obtaining a clearer understanding of the role of agricultural extension in economic and social development. Their decisions on the allocation of limited financial and human resources have a vital bearing upon the balanced development of rural institutions, including agricultural extension.

Although the basic principles included in this publication have evolved for the most part in the more advanced countries, the author has endeavoured, to the extent possible, to apply them to countries now in earlier stages of development of their extension services. Much of the material included has been prepared either by national or by technical assistance experts working in those countries and has proved to be effective in these situations.

The author wishes to express appreciation to a large number of people of broad experience who have contributed in a variety of ways to this publication. Credit is given in each chapter to specific contributors. Many others have very kindly allowed short quotations of their published materials or have offered invaluable suggestions. Finally, I should like to express my appreciation to the Rural Institutions Division (now retitled Human Resources and Institutions Division) of the Food and Agriculture Organization for providing the opportunity to prepare this publication.

Section I EXTENSION DEFINED

Chapter 1

THE MEANING OF EXTENSION

Concepts and Terminology in Agricultural Extension [1]

The term 'extension education' was first introduced in 1873 by Cambridge University to describe a particular educational innovation. This was to take the educational advantages of the universities to the ordinary people, where they lived and worked. The term 'extension' was first coined in England, not in America as often thought.

Within a decade or so the movement had spread to other institutions in Britain, the United States, and elsewhere. It is of interest to find that the first grants to the extension movement from public funds, in this case from English county councils, were for extension lectures in agricultural science.

As the movement was taken up, its programmes became adapted to meet the needs of the people, the place, and the time. In England, the first major change followed the formation of the Workers' Educational Association in 1903. The latter virtually took over the university extension movement and adapted it to the now familiar W.E.A. tutorial-class type of extension education.

The American extension movement started, on the same basis as in England, from the Universities and large public libraries. The first Director of Extension within the United States (University of Chicago, 1892) was an Englishman named Moulton. He had been one of Cambridge University's original extension workers and in 1885 had documented the first ten years of the extension movement—the world's first real treatise in extension. But, as with several other American adult education movements of the 19th century, popular enthusiasm waned almost as quickly as it had grown. There was some revival early in the next century, but it was largely by its agricultural and rural home programmes that extension made its major impact in the United States.

Agricultural extension, as we now know it, developed much later than the other extension programmes. But its origins in agricultural education, advice, and demonstration are as old as agriculture itself. And the sources of information and ideas include many countries. The student of comparative extension finds that most of the apparently indigenous national programmes are syntheses of inter-national ideas adapted to meet the local situation.

The Scottish Advisory Service is one of the oldest agricultural extension services in the world. It was established around the turn of this century virtually in its present form as a cooperative county/agricultural college/national programme. Concurrent agricultural education and advisory movements developed in England, continental Europe, and elsewhere, including Australia. For example, as early as 1889 Queensland started a successful dairy extension programme based on the use of two 'mobile dairy extension units' (trains). From this innovation and from its description as 'extension', it is apparent that local thinking was at least abreast of the then professional development.

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[1] R.N. Farquhar, Agricultural Liaison Officer CSIRO - Australian Agricultural Extension Conference 1962 - Reviews, Papers and Reports pp.114 - 117

The United States and Canadian development resulted from a complex of local ideas, mutual influences, and trans-Atlantic exchanges. The university extension of England led to the isolated agricultural extension work of the U.S. Land-Grant Colleges. The Farmers' Institute movement originated in the northeastern United States. The Women's Institute was adopted by the United States and the United Kingdom from Canada. Dr. Seaman Knapp's 'Farm and Home Demonstration' programme started in southern U.S.A. in 1902. It was sponsored and originally financed by the U.S. Department of Agriculture as a national effort to rehabilitate the cotton-growing areas. Later, state and local government finance and participation were added and it became a cooperative project. The 'County Demonstration Agent' system was inaugurated concurrently with the appointment of the first six district 'Agricultural Representatives' by the province of Ontario in 1907.

It should be noted that the term 'extension' was not used in connection with most of these early European and North American programmes. The term 'agricultural extension' was not finally adopted until the U.S. federal Smith-Lever Act of 1914 formalized a nation-wide cooperative federal-state-county programme, and gave operational responsibility for this to the Land-Grant Colleges and Universities. The present pattern of American agricultural extension resulted from this merger of a major national agricultural rehabilitation programme, plus some farmer and local adult education movements, with 'university extension'. However, it soon became such a large and vital programme that the use of the term 'extension' tended to be restricted to agricultural and home demonstrations.

The concurrent developments in Australia and elsewhere were based primarily on the appointment of 'inspectors', 'specialists' and 'experts' who had some advisory functions. From these, groups branches, and eventually subject-matter divisions evolved, with gradual decentralization of staff responsible for investigation, regulation, and extension. This was in sharp contrast to the North American developments which were based from the start on decentralized general practitioners serviced by state and regional specialists.

With the tremendous development of rural extension work in the United States in the following four decades, the term 'extension', and some of the know-how associated with this work, was again exported—this time from the United States and in further modified form. It should be noted that the original educational content and philosophy, and wider concept of rural extension as a method of assisting the development of farmers and farm families as well as of farms and farm production, were also exported. The present 'importing countries' include the United Kingdom—for where the philosophy, term and practice of extension originally came. The numerous changes in extension implemented in Europe in the post-war period reflect the strong American influence.

A further major modification should be noted. There is a definite trend, particularly in the United States and Canada, and most pronounced in the 'newly developing' countries of Asia and elsewhere, either for agricultural extension to broaden its subject matter base to include a wider range of subjects or for agricultural extension to be closely integrated into a much wider programme of 'extension' or 'community development'. For instance the four regional directors of extension in Utah are now responsible for all aspects of extension and adult education activities, including the agriculture and home demonstration programmes. The territory of Papua and New Guinea has a Department of Information and Extension Services which has a broad 'community development' approach and aims at coordinating and integrating extension activities in agriculture, health, local government, etc. somewhat on the lines of the huge 'community development' programme of India and elsewhere.

Detailed studies of how, when, where, and why our present extension programmes came into being, some aspects of which have been briefly summarized above, led the author to the formulation of some broad operational definitions.

Extension, in its broad sense, may be defined as: 'The extending of, or a service or system which extends, the educational advantages of an institution to persons unable to avail themselves of them in a normal manner.'

In other words, all forms of extension take education to the people. By definition, 'extension' and 'extension education' are synonymous. 'Agricultural extension' takes to the rural people that form of educational assistance best suited to their needs.

The author's definition of agricultural extension is: 'A service or system which assists farm people, through educational procedures, in improving farming methods and techniques, increasing production efficiency and income, bettering their levels of living, and lifting the social and educational standards of rural life.'

The above definition is quite broad. It includes the whole environment in which a farmer lives and operates as a legitimate field for extension activity. It recognizes that standards are usually different from levels of achievement. It is not restricted to farmer-contact work, but includes extension research, training, liaison, and information work as integral parts of the agricultural extension system.

It was in Europe that the author finally faced the hotly contested, values-weighted question of the difference, if any, between agricultural extension and agricultural advisory work. Investigations showed that, usually, the title in itself meant little. Often it was merely 'a rose by any other name'.

In the opinion of the author, whatever difference there is depends on the philosphies and attitudes of the extension or advisory workers themselves, and on the objectives of their organizations. If the approach is to supply information and help farmers in such a way as to make them dependent on continuing advice, the work is advisory work. Where the farmers are educated on how to tackle their problems, where to get information, etc., and the philosophy of the adviser is to 'work himself out of a job' (which, of course, he does not achieve in practice), then the work is truly educational and is definitely extension. This type of differentiation is now being recognized by many extension leaders throughout the world. But the fact remains that, for the present, the title of a service does not necessarily nominate whether or not it is solely or partly engaged in 'extension' work in the true sense of that word.

According to Savile 1/ 'the aim of all extension work is to teach people living in rural areas how to raise their standard of living, by their own efforts, using their own resources of manpower and materials, with the minimum of assistance from governments. By encouraging local leadership and a spirit of self-help, extension develops civic pride and the progressive growth of the community.'

The concept that the broader function of extension work is to help people to solve their own problems through the application of scientific knowledge is now generally accepted. If this be true then extension must be regarded as largely educational. But it is a different type of education than that taught in schools and colleges, a principle difference being that extension education involves no coercion of any sort. Adult farmers cannot be forced to learn new and improved practices. No extension service has the necessary staff to direct every action and see that it is carried out effectively. Extension education is dependent upon the ability of a limited staff of advisers to inspire rural people and to create a desire for more efficient production, and better living in the rural community. Farmers must be encouraged to meet in groups to secure the information

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The term 'Agricultural Extension' is widely used to differentiate between extension services to rural people with emphasis upon farming and farm living and extension of university teaching in other disciplines to those unable to attend institutions of formal education. In this publication the term 'Agricultural Extension' will often be shortened to 'Extension' for the sake of brevity. And both terms will be used to designate a system or service designed to help rural people to improve their own agricultural methods, incomes and levels of living.

1/ A.H. Savile, Extension in Rural Communities - Oxford University Press and assistance they have come to desire. As a representative of one developing country expressed it, if extension workers would devote more effort to the creating of a desire for information, farmers would come and ask for it, rather than wait for it to be brought to them. Farmer motivation thus becomes a phase of extension work worthy of careful study in any area.

Extension education differs from formal education in another important respect. It is concerned not only with learning but with the application of the knowledge gained to the everyday problems of rural living. It is an extremely practical and concrete type of education that may in most cases be put to use at once. Otherwise it is forgotten. This matter of timeliness must always be borne in mind in planning extension programs.

All definitions of extension education involve change; changes in the behavior of rural people presumably resulting in improved agricultural production, better living and a strengthening of the national economy. But fundamental to any permanent behavioral change is that of attitude. This is especially relevant when working with traditional societies. One has often heard the expression "farmers are conservative." They are inclined to trust the familiar and distrust the unfamiliar. They judge any change or innovation in the light of their own experience and the principles taught them by their fathers and forefathers. They seldom question these principles but try to apply them to the specific problem at hand. Conformity is a mark of a traditional culture.

In order to change behavior of many people extension must first change their attitude toward change, to cause them to question traditional practices, and to realise that they have the power to improve their own social and economic situation.

To bring about a change in attitude is a basic educational function of extension. It has been suggested that "it (extension) is not solely concerned with teaching and securing the adoption of a particular improved practice, but with changing the outlook of the farmer and encouraging his initiative in improving his farm and home. The effectiveness of extension is measured by its ability to change the static situation which prevails in rural areas into a dynamic one." 1/

Concepts of agricultural extension vary in respect to relative emphasis upon education, service, operations, programme and the aggressiveness of leadership of the extension service in bringing about change. The difference between an extension service and an advisory service as traditionally operated has already been noted. According to Savile, 2/ Advisory Services "were designed to advise farmers of improved farming techniques which would be of help to them and also to assist them to implement a benevolent government plan for the development of the country's economy. The personal wishes of individual farmers and their families were seldom if ever considered" - But as Farquhar indicates, at present in Europe, the name of the service means little and again quoting Savile "Agricultural Extension—is an evolution of the advisory service which can be regarded as a form of community development with an agricultural bias and an educational approach to the problems of rural communities."

In some countries the educational role of extension has been given too narrow an interpretation with undue emphasis on the educational process and too little on content. This has been true in some countries using the community development approach and in others where all agricultural subject matter is the province of technical departments. In such cases, the extension worker finds himself working in a vacuum with no source of subject matter at his disposal and no authority to assist the farmer in obtaining seed, fertilizer, implements, markets and other requisites of production.

1/ United Nations: Science and Technology for Development - Report of the United Nations Conference on the Application of Science and Technology for the Benefit of the Less-Developed Areas (N.Y. United Nations, 1963) Vol. 6, Education and Training

2/ A.H. Savile, Extension in Rural Communities
Oxford University Press pp 1 - 2.

At the other extreme is the Department of Agriculture whose Director told the writer that all of his field employees were extension workers because they had occasional contacts with farmers. In this case their field employees were so involved in administration and operation of other government programs that they had little time for educational activities.

Service rather than education may be justified when the national interest requires immediate action on a broad scale such as an infestation of cotton leaf worm in Egypt. At such a time spraying of the crop by extension employees may be justified. However, since this is an annual occurrence planning with farmers cooperative societies to conduct control programs would seem a more appropriate role for the extension worker.

A number of years ago the writer observed with interest a dairy extension project in a European country in which extension workers weighed the daily milk production and feed consumption of each cow in the herd and recommended a specific ration. Dairymen who received this service reported considerable saving in feed cost and increased profit. However, this was a repetitive service and there was no evidence to indicate that the farmer learned how to feed according to production. The cost of such service should be considered a part of the cost of operating a dairy and not as a free extension service, financed in part by the Government.

Many farmers will ask the local extension worker to prune their fruit trees, cull their chickens and vaccinate their animals every year. Unless the farmer learns to do these things himself, this is not extension education but a free service. If such service is desired, it may be provided through a cooperative society or commercial agency with the cost being borne by the producer who benefits rather than the public.

In many developing countries, the extension officer is responsible for direction of a number of government programs for agricultural development including marketing cooperatives, land reclamation projects, irrigation projects, gathering of statistics, enforcement of regulations and many others. All of these activities are essential elements of economic and agricultural development and require education of the rural population. However, an extension worker with such concrete operational responsibilities seldom has time to develop with the people a truly educational program to help them solve their recognized problems, or even to use the above mentioned services effectively.

The extension worker has an educational role in relation to each of these services and programs. It can be summed up in four words - involvement of the people. This includes such matters as analyzing with people the problems such programs are designed to solve; informing them as to technical and other available resources, explaining why such programs are desirable; obtaining a commitment from people to cooperate; organizing people to use resources made available; obtaining the views of people on ways of making these programs most effective under local conditions and training leaders for local administration of programs to the extent practicable.

Assigning personnel with exclusive educational functions may be difficult in countries without sufficient numbers of technically trained personnel to staff all essential agricultural institutions and services. This problem will be treated in the chapter on Extension Administration.

Objectives of Agricultural Extension

The concept is now generally accepted that the role of extension is to help people to help themselves through educational means to improve their level of living. However, this concept is only a very general guide to extension advisers, administrators and policy makers. Extension workers are interested in more concrete expression of purpose. Rural people want help in solving their immediate problems. And policy makers are concerned with the contribution extension can make to national economic and social progress.

Extension is one of many essential institutions and services dependent upon public funds for support. Although complementary to these other institutions and services, it must compete with them for financial support and for trained personnel. It must justify its existence not only to the rural people served directly but to policy makers, legislators and in fact the population as a whole. To do this it must not only satisfy immediate needs of its rural clientele but also contribute to the national welfare both immediate and long range.

In certain situations, national needs may surmount in importance the needs of the individual villager. In India today, food production is the overriding consideration in view of widespread food shortages. During the Second World War, food production was almost the exclusive objective of the Agricultural Advisory Services in Great Britain and the extension services of many countries. Where nutritional diseases are a serious problem, better use of foods in the diet may be more important than volume of production. Where soil erosion is serious and land resources are limited, conservation of the soil may be a major long-time objective of the extension service.

But such national objectives can only be achieved through the action of rural people. People may be motivated by patriotism for a time but soon lose their enthusiasm unless programmes appeal to their own best interests as they see them. For example certain governments reduced the established prices of food grains so that consumers could afford a higher level of nutrition. This resulted in lower domestic production and a shortage of supplies because of the reduced incentive to farmers. To achieve its purpose, both nationally and locally, the objectives of extension must be known and accepted by rural people as valuable contributions to their own welfare.

The Role of Extension in Economic and Agricultural Development

The economics of most developing countries are based on agriculture, with sixty to eighty percent of the people living in rural areas. Most of the available resources consist of land and people. Capital is in limited supply and must be generated through development of agriculture or procured from more advanced countries either through credits or foreign investment. Governments of most developing countries prefer to held foreign investment to a minimum while generating capital through the development of their own resources. Thus agricultural development becomes a prime factor in economic development.

Although there is great variation in quantity and quality of arable land, climate, water and other natural resources and ratio of land to people, developing countries have two characteristics in common. First, there is great potential for the development of increased agricultural productivity, and secondly, the potential for developing the human resources is almost unlimited. Almost without exception, crop yields average far below these in more economically advanced countries with comparable land and climate. Comparative yields of meat, milk and eggs are even less. Thus the difference between actual and potential agricultural productivity is far greater in the less developed countries than in their more technically advanced neighbors.

Anthropologists tell us there is no appreciable difference in the inherent intelligence or capacity of people of different countries or races. Difference in ability arise from environmental factors, one of the foremost of which is education. According to Leagans 1/ "Studies of the agricultural development process are increasingly recognizing the contribution of education as one of the essential elements in the process. These studies indicate that economic growth cannot be explained alone in terms of capital accumulation and growth of the labor force. But rather, the explanation for a large and possibly a major part of economic growth lies in investments in the development of human resources through education."

1/ J. Paul Leagans, Professor of Extension Education, Cornell University
Ithaca, N.Y.

It is well known that economically less developed countries have a higher ratio of illiterates in the total population than more advanced countries and that the rural population has a higher rate of illiteracy than urban population.

Any sharp and continuing acceleration of agricultural productivity requires the breaking away from traditional attitudes toward change. This can be achieved only with the aid of mass education. Thus the development of human resources through education offers not only one of the greatest possibilitiesfor economic advancement but is a prerequisite to the application of the technology required to increase agricultural productivity.

Agricultural extension is only one, although a very important form of education. Elimination of illiteracy through mass education, social education to teach people to live and work together in harmony and greatly expanded technical education all contribute to agricultural and economic development. But development can not wait for a new generation of educated people before begining to move. Furthermore, rapidly advancing agricultural technology requires continuing education for rural adults regardless of their level of formal education. Governments are increasingly recognizing that this need must be filled through some form of voluntary adult education, usually in the form of agricultural extension.

It is important at this point to put agricultural extension in perspective in relation to other elements of agricultural development. Mosher 1/ makes a distinction between "essentials for agricultural development" and "accelerators of agricultural development" contending that autonomous changes may occur due to changes in environment. Agricultural development requires certain essentials but equally important, means of accelerating change in the desired direction. Among the essentials of agricultural production Mosher lists the following:

1. Markets for farm products
2. Constantly changing technology
3. Local availability of supplies and equipment
4. Production incentives for farmers
5. Transportation

The accelerators include:

1. Education for development
2. Production credit
3. Group action by farmers
4. Improving and expanding agricultural land, and
5. National planning for agricultural development

Admitting that some development will take place without the "accelerators" mentioned by Mosher, such development is nearly always so slow or temporary that the writer would lump the essentials and accelerators together as requirements for a viable progressive agriculture. With the above reservation, Mosher's classification provides a tool useful in putting agricultural extension in perspective in relation to other requirements for agricultural development.

Few if any governments of developing countries have provided all of the above requirements in balance and to the extent necessary to be effective. Some governments have invested a major part of their available resources in improving and expanding agricultural land through irrigation and land development and neglected many of the other essentials. In most instances these efforts have failed to achieve the expected increase in production. In other instances, governments have been oversold on education as a cure-all for agricultural ills. They have based their hopes for agricultural development

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1/ A.T. Mosher - Getting Agriculture Moving, Essentials for Development and Modernization, The Agricultural Development Council Inc., New York.

upon their extension or community development programs while neglecting to supply the facilities or incentives for production, or one or more of the other essentials. In some cases governments have assigned to their extension services responsibility for distribution of supplies and equipment, supervision of credit, regulation of markets and other functions not compatible with their basic educational role. In most instances the extension services were not well enough staffed or financed to assign additional personnel to these non-educational functions. Consequently, either the educational program or the operational activities or both were only partially effective.

Extension has not made the expected impact on agricultural production in many countries where extension services have been in operation for a decade or longer. This is not because the concept of extension education is invalid. Failure to achieve its purposes is usually due to one of three factors: 1: failure of governments to provide the other essentials of agricultural development, 2: inadequate support of extension with financing or personnel, or 3: ineffective administration and operation of the extension service. The main purpose of this publication is to assist extension workers to conduct a more effective extension education program with the resources provided and within the structure of essential rural services.

The Role of Extension in Agricultural Policy Formation

Extension education can and should play a vital role in the formation and implementation of agricultural policy. Black 1/ lists two important interests in relation to food and agriculture policy: First, the well-being of farming folk and secondly, the better nutrition of mankind. Although these interests are basic the writer suggests that a third interest is important in many newly developing countries. This interest is the overall and continuing economic and social growth of the nation. Economics of most newly developing countries are based largely upon agriculture, although some have mineral and other basic resources. At this stage of development, most of these countries are dependent upon agriculture not only to feed the population but to provide food and fibre or the raw materials for manufacture into items for export and to provide a domestic market for a growing manufacturing industry. Cotton in Egypt, rice in Philippines and Thailand, cocoa in several African countries, coffee in Brazil, tea in Ceylon and Indonesia and jute in India are important earners of the foreign exchange so necessary in financing economic development. Agricultural policy must contribute to the economic and social progress of the country as a whole as well as fulfilling its central responsibility for the well-being of rural people and nutrition of the population.

It is the task of agricultural policy makers to determine the direction of growth of agriculture, to set goals for development, to devise means of achieving these goals, to evaluate progress periodically and to revise goals and programs when necessary. It is usually necessary also for policy makers to devise legislation required for the implementation of the policies which have been adopted.

Agricultural extension has an important role to play in both the formation and implementation of agricultural policy. Although agricultural policy is formulated by government officials and touches upon the interests of all segments of the population, its execution starts with changes in the attitudes and redirection of the actions of the masses of primary producers, the farmers. Without their cooperation nothing happens. Food and fibre must be produced before they can feed and clothe the population, be used in industry or be exported to generate foreign exchange.

1/ John D. Black, Future Food and Agriculture Policy, McGraw Hill Book Company, New York. page 1

Extension properly conducted serves as a line of two-way communication between policy makers and farm people. Effective extension workers are in close touch with the people they serve, know their problems and capabilities and have their confidence. Such extension workers are in the best possible position to advise policy makers on the needs of rural people, the effect a given policy will have upon their welfare, how rural people will react and what adjustments must be made to fit local situations. Settlement of landless people under an agrarian reform program may involve people with no previous experience in management of a farm under those conditions. The extension worker can advise policy makers of training requirements and the facilities necessary for an effective training program.

Extension administrators can and should urge the adoption of policies that are in the best interests of rural people and that provide an incentive for cooperation in their execution. Policies which require force for their implementation are unlikely to be fully effective.

When a policy has been adopted it is the task of extension to inform people affected not only what the policy is but why is it necessary and how they may use it to their advantage. An East African government adopted a policy for soil conservation and undertook to terrace eroding fields using mechanical equipment. Farmers were told to follow the contours with their row crops. This they did while under the direct supervision of the extension adviser, but the following year they planted their crops across the terraces ignoring instructions. They had been told what to do but not why. They did not realize that the recommended conservation practice would increase yields over a period of time.

Some Conditions Conducive to the Development of Effective Extension Services

Some of the elements conducive to the development and continuing effectiveness of extension services may be summarized as follows:

1. A national policy embodied in legislation establishing the educational role of the extension service and the relationship of extension education to other elements of agricultural and rural development.
2. A philosophy of extension education embodying the concept of human resources development as a major goal.
3. Sources of the technical information required for the solution of the problems of rural people.
4. Sources of trained people adequate to supply the personnel needed in extension and other related services.
5. Adequate ancillary services such as farm supply, credit, transportation, marketing and veterinary services, without which extension teaching is largely ineffective.
6. An environment conducive to continuing agricultural and rural development including such things as incentives for production, political stability and a land tenure system which assures the producer his fair share of the benefits accruing from improvements in his farming practice.

Chapter 2.

EXPERIENCE WITH HUMAN FACTORS IN AGRICULTURAL AREAS OF THE WORLD[1]

The Contribution Sociology, Anthropology, and Social Psychology Can Make to an Understanding of the Problems Involved

An effective program consists of a synthesis of technical and practical knowledge. It also consists of the construction and operation of channels of communication between rural folk knowledge at one end of these channels and scientific knowledge and administrative authority at the other. Sociology, cultural anthropology, and social psychology are the social sciences that have developed knowledge of, and techniques for, analyzing and understanding the groups that live and work at the two ends of these channels. These sciences also possess the techniques that make possible continuous study of the interactions of the groups involved in the operation of an extension program.

Some of the knowledge and understanding that these social sciences can contribute are needed even before an extension program is launched. But successful operation of the extension program will automatically change the behavior of groups involved in the program, will almost certainly change the channels of communication between these groups, and thereby will change all the situations that existed before the program was launched. Social sciences can therefore make a contribution to an extension program after it is launched, while it is in operation and while it is in preparation.

The very purpose of an extension program is to introduce change. In human relations it is impossible to foresee the effects of one change after another, hence there is no way of planning or plotting the program by a fixed blueprint, such as is possible and feasible in constructing a bridge or a highway. It is within the function and capacity, and should be the responsibility of the social scientist to observe, analyze, and report upon the influences of changes that are accomplished and to make recommendations for the constant effective adjustment and readjustment of the extension program and processes.

Cultural anthropologists have made hundreds of studies of rural folk groups and folk cultures. Sociologists are constantly studying social structures and social processes. Sociologists and social psychologists are constantly studying personal and group interactions. Out of the understanding they have developed, and by means of the analysis techniques they have evolved, they are in a position (1) to analyze the groups involved in an extension program, (2) to analyze the relationships of these groups one to the other - that is, the channels of communication between them - and (3) constantly to analyze and appraise the changes that have been accomplished and the progressive adjustments that are needed in the program in light of these changes.

In a report of this length, the best that can be done is to set forth principles and present a few examples of where and how these principles have operated in situations similar to those technical people will meet in the underdeveloped areas of the world.

1. Introducing and Inducing Change in Folk Practices

A. Societies Differ in Their Value Systems

Every society has certain practices and beliefs which the members of that society consider the most important and valuable things in life. Through the years, elaborate institutions have developed to safeguard and perpetuate these values, and the elders see to it that all young members of the society become thoroughly conversant and imbued with the beliefs that sustain these institutions. In the United States, a premium is put upon success and individual initiative, whereas many other societies minimize individual initiative by urging social conformity as tremendously important.

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[1] Report of the Committee on Social Sciences in Relation to Extension Work, of the Conference on Extension Experiences Around the World, Extension Service and Office of Foreign Agricultural Relations, cooperating. May 16-20, 1949

Thus there are two important points to remember in connection with the value system of any society: (1) It exists and is so deeply ingrained that to ignore it would be folly; (2) the value system of one society differs in many details from that of another society. Programs must be tailored to fit in with the value system of the specific group whose practices it is desired or necessary to change and to use that system.

These points become clear if we use an Arab society as an illustration. There the social values are based on the family, church, and village rather than on the individual. Tannous says, "To the fellah there is no segregation of his land and agriculture from his religion, social activity, family life, and community organization. This influence (of church, family, and community) extends also to such personal affairs as marriage, funerals, rotation of crops, and methods of cultivation". He adds, "Social control in these compact settlements is strong and effective, and the fellah will hesitate to take a new step independently. In facing such situations individuals manifest their community consciousness through such statements as 'The whole village is for the new idea,' 'The village is against this innovation,' 'I like what you suggest, but I cannot stand against my village.'" 1/

Anyone from a non-Arab society who compares the aforementioned traits with the values of his own society can readily see that he cannot approach an Arab community through an American value system. Any program must be fitted into the specific characteristics of a particular society and make use of those characteristics. There are far too many examples of programmes, well-intentioned and unselfishly inspired, that fail because these basic cultural principles are ignored.

B. Societies Are Already Organized

A second principle of major importance in the task of changing folk practices is the recognition that societies are already organized to do for their members what those people think is important. Through the centuries, every group has worked out a way of life, a set of social relationships that is accepted as "normal" and considered to be the proper and right way of getting anything done.

We can understand this social organization better if we look at some of the parts of which it is composed, provided we recognize that each of these parts is interrelated.

1. Social institutions - The social arrangements worked out over a long period of time to meet life's basic needs include:

a. Families, through which procreation is carried on and the cultural heritage transmitted to each succeeding generation.

Societies differ considerably with respect to specific family patterns, but universally we find infants born into a family circle in which parents or relatives have fixed responsibilities for the customary upbringing of the child. Anyone wishing to change established

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1/ Tannous, Afif I. Extension Work Among the Arab Fellahin. Farmers of the World, Ch. 7. Edited by Edmund deS. Brunner, Irwin T. Sanders, and Douglas Ensminger. New York. 1945. See pp. 78-100 practices must know the important role played by the family and try to find the points at which the institution of the family can be made to serve the program of change. If parents can be really shown that their children will benefit by a different health procedure, then they may adopt it. If young people, before establishing homes of their own, can be taught new ways of doing things, they will be likely to pass on such practices to their own children.

The Chinese family as one of the ancient institution cultures. "Continuing the family line is the main concern of the Chinese farmer," says Martin Yang. "Children, parents, and grandparents are a tightly knit unit and when that unit or unity is imperilled, all members feel the disaster. Those who work on the farm, work for the whole family. Individual personal belongings are negligible, all is family property and the continuity of the family line depends upon the uninterrupted transmission of the family's common property. So strong is this value system that even though a man inherited nothing from his parents but has accumulated all he possesses through efforts of himself and wife, he will leave his property to his children with the admonition, 'Keep it intact forever.'"1/

One who assumes that any programme of activity is possible when it contemplates merely training individuals to act purely as individuals, is doomed to disappoint in societies where families are the core units of culture. As Yang says, "The individual when he attempts to act in a purely secular fashion finds that he is enmeshed in a family structure which dictates that he do only his age-old assigned division of labor and do it for a family, not a personal objective."

b. Maintenance institutions, through which the material needs are met.

Every people has organized itself so as to insure a food supply, shelter, whatever clothing is deemed necessary, and transportation. In the simpler economies, such activities are primarily connected with the family institution, but along with advancing technology come a more complicated property system, greater occupational specialization, a marked division of labor, and social arrangements for producing the material necessities by joint effort and for distributing such products widely.

Any attempt to change methods of production, to equalize distribution, or to alter consumers' demands must take into account the existing maintenance institution. Property rights, for example, cannot be blithely ignored, nor can people be easily persuaded to eat what they consider to be unclean or what they revere as a totem. Furthermore, cash incomes are very small among most of the world's people, and they do not possess the economic capacity to pay for many of the implements, purebred stock, animal feeds, commercial fertilizers, etcetera that would-be reformers urge them to procure. In most peasant societies a villager prefers an extra strip of land to a tractor. He will say, "I can grow more food out of the land and can eat this food, but the tractor produces nothing out of itself." A tractor, of course, does save labor and make for more efficient plowing, but most peasant families already have a surplus of labor for the small farms they call their own. Therefore, any program of change, if it is to be successful, must face this reality, not just in terms of buying and productive capacity, but also in terms of the existing social arrangements governing economic activities.

An example of the resistance of a group of natives to the adoption of "wet rice" cultivation is cited by Linton. One of the Tanalan clans of Madagascar objected because irrigation practices would result in continuous farming of one tract and, as a consequence, would develop individual rather than group rights in land holdings. Such a development would lessen the importance of the "joint-family" not only in ownership but also in cooperative

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1/ Yang, Martin C. A Chinese village: Taitou, Shantung Province, Ch. 7. New York: 1945.

labor and mutual sharing. The clan did not deny the superiority of "wet rice" culture in producing maintenance goods, but it was resistant to an innovation that so drastically altered social arrangements that are sacred to it. 1/

Many similar instances could be cited. There are others, altogether too few, where administrators have tied their programmes to existent local social structures and value systems and thereby facilitated adoption of new practices.

c. Government: which is supposed to maintain law and order, protect from foes without, and in general to promote the welfare of the society.

In Western nations, governments increasingly become associated with programs designed to change the old established ways in favor of scientific, rational practices. But those societies where government by elders is the chief pattern are largely ruled by custom and tradition and tend to resist rapid change. Even so, every government, since it is essentially a social arrangement, has ways of reaching those within its territory and there is no escape from using it.

In some countries, the central government is in fairly close touch with its citizens and is a relatively effective mechanism for transmitting new ideas and initiating social change. In other countries, the people view government as nothing but a tax-collecting agency which takes, but gives little in return. The people of such countries are suspicious of governmental programs. This is a hurdle that a promoted extension program must jump because it must enter all underdeveloped areas through governments.

If government is to be an effective instrument in programs of change among the masses, it must work through local officials who are truly leaders in local areas. Progress comes faster and is surer when these officials are made intelligent about programs and given heavy responsibility for them. Let us note, for example, the approach that would need to be made in a Japanese village. Each village is generally subdivided for administrative purposes into from 6 to 12 local units called buraku. Each buraku has long been headed by an elected official, whose primary function is to maintain liaison between the village office and the buraku residents. These burakus are the age-old natural groupings of the people which have been converted into administrative units. They in turn are composed of kuru, also ancient neighborhood groups each consisting of from 5 to 10 households. Nothing comes into these local areas from the village, prefecture, or central government except through this official. To attempt to promote any program in a Japanese village without using these instruments of social action and these units of local government would be little short of folly.

If the social sciences have anything at all to teach, they certainly have proved that popular acceptance of a program is in direct ratio to the degree that local representatives have participated in the conception and formulation of the program, and that progress comes faster when those who are supposed to be helped have something to say about the programme in the beginning. Nations with colonial empires have learned, or partially learned, this lesson through painful experience. Anyone who doubts it should read Prof. T.S. Simey's revealing analysis entitled "Welfare and Planning in the West Indies."2/

d. Some system of education, which is supposed to aid in the preparation of the young for adulthood by inculcating in them the basic social values, and in developing the skills necessary for participation as citizens and as economically self-supporting individuals.

1/Linton, Ralph. The Study of Man. New York, London. 1936. See pp. 348-55

2/Simey, T.S. Welfare and Planning in the West Indies. Oxford. U.P. 1946.

In many societies, the institution of education conducts activities among adults and thus increases their personal satisfactions and social usefulness. The schools, which are the concrete expression of this widespread institution, become the channels for directing some social change. They frequently are busy conserving the past, but do at times bring their energies to bear upon solving local current problems. Rapidity of social change seems directly related to literacy and educational attainment, for these cultivate a questioning frame of mind and open up through pamphlets and books additional channels of communication.

Any program for change, therefore, should carefully assess the part the school can play. Far too often the school is a means of weaning the brightest boys and girls away from their local communities, when it should be more concerned with directing awakened interest on the part of the young into constructive efforts to improve local conditions.

Social change comes more easily when people have developed an experimental or educational point of view, a willingness to try a new practice before condemning it. As schools spread the scientific spirit, even though they may not train professional scientists, they lay a splendid foundation for local and national authorities to use in improving health, agriculture, and homemaking.

The experience of Mexico in launching and carrying forward her great movement of change is a good example of the need for schools and their use. A Federal Secretariat of Public Education was organized and a programme designed to carry education to the Indian masses. Persons were first sent into isolated regions to familiarize themselves with local conditions and to stimulate a desire for schooling. Then, when schools were organized, attendance was not confined to children, or the subject matter to literacy education. It was deemed necessary to educate adults as well as children, and it was recognized that the program of change included many types of activity-production, health and sanitation, land reform, and even the reorganization of communities. The first teachers were called missioners and ... were expected to play the combined roles of teacher, supervisor, administrator, research workers and philosopher.1/ Mexico's leaders recognized that their programme of change meant change in the life of the masses, and that only the government could sponsor such a giant movement.

e. A religion, which represents man's adjustment to the uncontrollable forces of his universe, and seeks to orient the individual to these forces (God, Allah, spirits of many kinds) and to acceptable behavior toward his fellow men.

This orientation includes not only a set of beliefs and a means, through worship and sacrifices, of obtaining sufficient dynamics (a recharging of his spiritual batteries, as it were), but it also provides a set of intermediaries (clergy, priests) who stand between the worshipper and the deity and who interpret to the worshipper the will and attributes of the deity.

The history of every society is full of instances in which the intermediaries and the more zealous of the worshippers have opposed social change on the grounds that it was contrary to the will of God. But the records also show, and with increasing frequency in our own day, that the world's major religions are also playing an active part in ministering to the nonspiritual as well as spiritual needs of their adherents. Here, as in the case of government, much depends upon the attitude and training of the local religious leaders. Where there is a desire to change, precedents can be found in almost every religion that would give some religious support to the change. Tannous tells the story of how the installation of a village pump was accomplished in an Arab village after outsiders had absolutely

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1/ Whetten, Nathan L. Rural Mexico. Chicago. 1948. See pp. 404-53 failed in their attempts to accomplish this much needed sanitary improvement. It was accomplished not only by patiently explaining that the iron pipes would not spoil the taste of the water or quickly drain all the water out of the spring and by demonstrating the labor-saving use of the pump, but also by quoting from the Koran - their Bible - that cleanliness was required from every faithful Moslem and that man should do his best to avoid the danger of disease.1/

C. Locality Groupings: Neighborhoods and Communities

Every society contains locality groupings that play an important part in the daily lives of individuals. In rural societies the neighborhood, composed of families living near one another, provides the basis for mutual aid, much social visiting, and the play activities of children. Extending beyond the neighborhood is the community, often a village, with which each individual feels closely identified and which frequently is the centre of his little universe. He is susceptible to village opinion and many of his wants are satisfied locally.

In the local setting one finds the various institutional representatives in competition or in cooperation with each other. The "open sesame" to most homes may be through the family elders or the priest, the governmental authorities or the school teacher, the merchant or the physician. Knowing which institutions to stress on the local level grows out of understanding the community and its relation to the larger society of which it is a part. Programmes with a community orientation have the greatest chance of success, since the appeal is not to people as separate individuals but as members of a going concern, a set of social relationships, in which all members of the group participate willingly.

Leonard describes such groups among the Bolivian Indians. He said the present-day Ayllus are small closely knit communal types of locality groupings which originally were held together by social and kinship bonds (clans). The most obvious solidifying force now is common ownership in land. Leonard says, furthermore, that except for the more accessible Ayllus in the Lake Titicaca basin, this fundamental unit of organization in the Bolivian highlands has undergone few fundamental changes in four centuries. The severe exploitation of the native peoples by outsiders has fostered in the Indian fear and distrust of other than his own immediate fellows. Out of this arose the general belief that his only chance for any remnant of social, political and economic security lay in his ability to remain a part of and among his own kind, for it is in the communal life of the Ayllu that he is a bona fide member of a social grouping composed of individuals whom he considers little different from himself.2/

Within every community are a number of informal groups that come into existence as people gather to gossip, loaf, or drink. Often the same people come together periodically and share their views with each other, thus becoming a part of the gossip chain which has so much to do with the formation of public opinion. Any extension program should recognize such groupings and see to it that a correct interpretation is made to enough of the "right" people so that the word-of-mouth version aids instead of hinders the activities in view.

Formal organizations also loom large on the horizon of many communities, and where the participation is widely representative or embraces those most influential, these groups can be used to advantage. A number of people can be reached simultaneously and are in position to give the weight of their backing once they become supporters of a program.

1/ Tannous, Afif I. Op. cit. See pp. 97-100

2/ Leonard, Olen E. Locality Group Structure in Bolivia. Rural Sociology, vol 14, No. 3. Sept. 1949. See pp. 250-60

D. The Status System and Leadership

Every society has ways of ranking individuals either at the top, the middle, or the bottom of the social scale, and expects them to perform the roles appropriate to their social positions. The status system is directly connected with the social values which most of the people share.

Since every program needs leadership to carry it on, those responsible for it must do more than rely upon the institutional leaders previously mentioned. They should also include representatives of the various social layers involved in the program. A landlord is not necessarily the best spokesman for his tenants, nor can the disadvantaged farmer objectively appreciate some of the problems of the large landowner. The views of artisan groups in a village and those of the landed peasants may differ, and the village merchants and their coterie of followers may seriously oppose an uplift program that might seem to endanger their position. In general, the programme's accomplishment will be greatly speeded up if is has the blessings of the "powers that be," but this alone will not guarantee programme acceptance. This is where a broader representation proves of value. Witness the following (in establishing folk schools):

"Because no headway had been made within 3 months' time, it was necessary for the Director to visit the community. Upon his arrival he discovered that his three representatives had ignored 'Old Chang,' who was the 'head-eye' man of the community. A social get-together was immediately arranged to which 'Old Chang' was invited and accorded due respect. Within 3 weeks three folk schools were opened. 'Old Chang' gave his blessing and his full support once his position as 'the boss' of the community was recognized."[1]

1. Disadvantaged people cling strongly to attitudes and beliefs. - By and large, people under stress tend to cling strongly to their beliefs and regard an effort to change them as an increased source of insecurity. However, not all beliefs are equally strong. Some are more intimately tied with the sense of security than are others. It is therefore important to distinguish the fundamental beliefs from those of a more superficial character. As a rule of thumb, one should never attack the fundamental types of belief, directly. If erroneous and incompatible with reality, the fundamental beliefs will themselves dissolve in the course of time, but nothing gives them life like a direct attack upon them. Their untruth has to be discovered slowly by the people and at the same rate at which the people are finding new sources of security. A belief upon which a person's security depends cannot simply be wiped out. Disillusion from the belief has to be accompanied by a shift of dependence upon a new kind of support. This means that remedial changes such as those called for in extension work should be planned in successive stages stretched over a period of time.

The extension worker who is trying to make changes within a culture may expect to find one of three attitudes in connection with his program: acceptance and cooperation, hostility and resistance, or apathy and indifference. It is important for him to realize that these three states of mind can exist and come to bear on him without the main driving force behind them having very much to do with what he does or says. The alert, cooperative, rational type of action is found when people have a reasonable basis for existence; but people under severe stress - physical, social, and phychological - characteristically react by having either a high degree of hostility and aggression which they will discharge on any convenient object that will not annihilate them by retaliation, or by being apathetic and indifferent and therefore not lift a hand to do much to save themselves. It cannot be stressed too much that behavior of this kind is reactive and almost reflexive among human beings. Therefore, the person who goes out to make changes within the culture of other peoples must expect to find these negative reactions when the people are suffering stress, which of course is the case in most of the underdeveloped areas across the world. One is doomed to failure and disappointment if he expects to be able to overcome resistance, hostility, or apathy quickly or by any single device or formula. A very long period of consistent and successive demonstrations of the person's reliability and integrity, and his capacity to produce results will be required. The hope needs to be on the cumulative effect and not on any one or two "shots in the arm."

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[1] Yang, Hsin Pao. Promoting Cooperative Agricultural Extension Service in China. Farmers of the World, Ch. 5 See footnote 2

The positive toeholds that exist in almost all communities, though they do vary in the cultural form, are the opportunity to create a greater economic or subsistence security and to gain prestige and admiration, that is, for the individuals in the community to gain prestige and admiration by participating in a given activity or having something to do with it.

The best remedy for uncooperative, hostile, and resistant types of behavior is relief of the stresses that are causing these attitudes and actions. That is, one should try to cope with the fundamental causes and not with the symptoms, always bearing in mind, however, that neither one remedy nor a single dose is going to do the job. If the program of introducing a change is successful, then not only will the change itself take place, but a whole series of repercussive changes will result from it which markedly alter the picture.

The successful operation of this process was illustrated among the Navajo Indians a few years ago in an attempt to change their breeds of sheep. It was impossible to convince them to follow the type of information that had been thoroughly validated by scientists. They were fearful that they were being tricked by outsiders whom they had not invited into their midst. Only after a few producers had been induced to use one-half of their grazing land for the production of their old type and the other half for the new type, with a firm financial guarantee of no loss, were the new breeds allowed to prove their superiority in the production of both wool and mutton. Once the new practice was understood, however, the gates to other accomplishments were opened, because the fear, even hostility, of a disadvantaged group had been dispelled by a willingness on the part of the scientist to compromise and wait for proved results.

2. Introducing and Inducing Change at the Top of the Social Structure

Extension and all other large organized programs must find their way into the economic and social structure and practices of the underdeveloped areas of the world through the medium of the governments of the nations within whose boundaries those areas exist. Therefore, an understanding of, and work with, groups of administrators and technicians who function at the top end of the channels of communication is as important as an understanding of the folkways and social structure of the farm people at the other end of the channels. These groups of administrators and technicians in practically all areas include the national rural-life leaders who have the status and prestige needed not only to launch but to sustain and operate programs of change and improvement.

Like similar groups all over the world, the status and prestige of the groups of administrators and technicians are part of the social structure and culture of their societies. Like every other status group, they have accepted and sanctioned ways of doing things which must be used, must often be mobilized, and sometimes must be changed.

In some ways the established patterns of behavior of these groups are more difficult to change than are the folk practices of the common people, chiefly because personal and professional prestige is at stake. Their members have come into possession of prestige and power partly because they have become qualified by either political activities or technical training. They may not be persons with a large body of knowledge and an understanding of the people in the underdeveloped areas of their countries, but they are educated, influential, and powerful. To the extent that change and improvement are necessary in their ideas, understanding, and operational behavior, no matter how delicate the task, such change and improvement are necessary. Not to utilize their prestige and power and to build upon their past accomplishments is to violate cultural processes. Not to help improve their knowledge and practices is to block or impede the channels of communication by which extension programs reach the people they are designed to assist. Like all cultural change the components of change are complex in these groups, and the process of change necessarily is evolutionary.

The class structure of many areas of the world is such that it is scarcely conceivable that a farm-born and reared person will be represented among the technical and governmental leaders. Non-farm persons must be able to perform the roles of leadership in all agricultural programmes. They may or may not be theoretically trained, but they are seldom, if ever, practically trained for these roles. Nevertheless, they must be depended upon as the channels through which, and the instruments by which, programmes of change and reform are initiated in the agriculture and life of the farm people. To ignore them is impossible; not to understand them as a culture group would be to defeat any and all programmes.

In countries in which few or no farm youth receive college or even high-school education, the surest programme of change would be to construct a professional ladder by means of which farm youth could and would climb from the level of their folk knowledge to the levels of science. They would then know their way back down the channels of communication to the folk from which they came.

The construction of such a professional ladder, however, necessitates an integral programme of education and training from grade schools, through high schools, to college, and this cannot be done quickly. Until a small stream of farm boys and girls with the knowledge of the folk practices and values of the common people has passed through grade school, high school, and college, and these young people have become members of administrative and technical groups at the top of the channels of communication, others must be worked with and depended on.

It cannot be too strongly emphasized that these administrative and technical groups are an integral part of the social structure and culture of every country, that they have traditional and established ways of doing things, have status, prestige, and power; and that they are leaders. They are the vehicles through which extension programs must enter the country, and they must be depended upon to guide and operate the programs once they are established. They must be used and must be understood.

In broad terms, the following are part of the social structure and folk culture of these top-level groups in most of the countries that include the underdeveloped areas of the world: 1. Ordinarily, they are persons who were not born and reared on farms. 2. They are few in number and generally highly centralized in both location and organization. 3. The folklore of the class to which they belong, and indeed of their whole society, does not assume that they will communicate freely with the farm people whom extension programs are designed to serve. 4. One of the symbols of their prestige is that they do not work with their hands or talk the langugae of manual workers or farmers. 5. In many cases the economic and political structure of their culture has dictated that they chiefly serve special segments of the farm population instead of serving all of the farm people. 6. In their official capacities they are burdened with many duties of inspection and other police functions. 7. Frequently, neither their technique nor experience has helped them to understand the simple people in isolated rural areas, or to be experts in constructing and operating channels of communication.

These characteristics are not listed as criticism of persons or groups, but merely to emphasize that no extension program can effectively enter the lines of communication between technicians at the top and practising farmers at the bottom without passing through the culture groups that constitute the national rural life leaders of all countries; and further to emphasize the fact that the traditional attitudes and functioning operation of these groups are just as truly a part of the country's culture as are the folk practices and attitudes of the farm people of the country.

Extension programs will work effectively to the extent that these groups (a) have a combined knowledge of folk practices and science, (b) have a thorough knowledge of the lines of transmission between science and folk knowledge and between scientists and the folk peoples, and (c) be thoroughly capable of communicating their scientific and technical knowledge by means of all levels of communication through which extension programs must pass from top to bottom and bottom to top. Furthermore, only after this process has worked for a period of time will psychological impediments to communication disappear.

In the meantime, scientists and experts from other areas of the world must and will be working side by side with the administrative and technical groups of the nations within whose boundaries lie the underdeveloped areas. In such cooperative work it is imperative that the foreign experts be sympathetically cognizant that (1) they, as truly as those who work with the simple folk at the grass roots, are working with the processes of cultural change; (2) the people with whom they work have both personal and professional self-respect which must not be violated; and (3) even though the technical and administrative groups of the country may not be as thoroughly trained in the sciences and administrative procedures of extension programs as are their foreign collaborators, they undoubtedly have a far greater knowledge and understanding of their own country, its people, its governmental structure, its social classes, and its customs and traditions.

3. The Channels of Communication Between Scientists and Administrators and Folk Groups

It has been made clear that extension plays the very important role of a dynamic medium of communication between rural folk on the one hand and scientific and administrative authorities on the other. For extension to bear its desired fruit, it must maintain a smooth functioning of this two-way traffic; from the farmer to the scientist and administrator, problems and field experience; and from the scientist and administrator to the farmer, improved practices and techniques. The extension program will suffer to the extent that the channels and techniques of communication between these two groups are inadequate or ineffective. Social science is in a position to make a fundamental contribution to extension in this respect. Its analyses of group relations is a constant reminder of the significance of efficient means of communication and the necessity for them. The knowledge it affords keeps the authorities concerned alert to the possibility of adopting more effective techniques continually. Social scientists, therefore, are equipped with the knowledge that enables them to make a thorough analysis of the channels and techniques of communication that exist in specified situations. By virtue of such analysis, they are able to make pertinent and specific observations, such as:

1. Each culture, and sometimes a region or a community within a culture, has its peculiar means of communication as well as those common to other cultures. It must not be taken for granted that the channels and techniques of one culture necessarily exist in another, or that they would function effectively if they were introduced. To illustrate, written literature is of little value among groups that are highly illiterate; yet we have many examples of authorities indulging in the production of bulletins, pamphlets, and the like, supposedly for the benefit of such people. Other means of communication of advanced cultures such as mail service, the telephone, the radio, and the automobile, might be lacking or much restricted in the rural areas of less advanced cultures. Local means must be depended upon, possibly improved, until the more advanced techniques are established.

Examples of such local channels follow: (a) Womenfolk gossiping at the village bakery and the village well, and during social visits or while doing field work; (b) men gossiping in coffeehouses, at threshing floors, during social visits, and sometimes while doing field work; (c) news and views exchanged during the weekly market, at funerals, and during religious festivals; (d) the village crier, who informs the whole community of important news by shouting it out at night; (e) the church bell, which, when struck at a time other than at regular worship, is the signal for the community to be on the alert for an important event; (f) the homes of recognized community leaders, the carriers of prestige, where people gather for up-to-date and authentic information on various topics; (g) special carriers of messages; (h) the village writer, who specializes on writing petitions, letters, and the like, for illiterate folk; (i) the story reader or teller; (j) other key persons, such as the teacher, the priest, or the headman, who read the paper or other literature to the people and pass on instructions from authorities. Knowledge of these channels and instruments of communication should be had before programs are launched, because the gossip groups can be used to develop suspicion and hostility against the programmes as well as receptivity for them. To understand these types of groups and their behavior is as important as a knowledge of physical roads and paths leading into the areas where programs are to be launched. To obtain this understanding, we must turn to the social scientists, who are expert in analyzing these groups.

2. Every means or type of communication has two aspects, the tangible physical or material aspect, and the less tangible social or psychological aspect. The former differs little, whereas the latter differs a great deal from culture to culture. A thorough study of a means of communication with proper evaluation of its psychosocial implication is essential. A poster using a pig to illustrate the essentials of good feeding would certainly defeat its own purpose if used in Muslim communities. An illustration based upon the butchering of a cow would be equally ineffectual among the Hindus. When, some 20 years ago the King of an Arab country introduced the telephone, he was strongly opposed by the religious leaders on the grounds that it was the work of the devil. The wise king established that efficient means of communication in the sanctions of his people by making it transmit a verse from the Koran, Allah's Book. This proved that the telephone could not be an evil instrument.

3. The personal touch in human relations is an outstanding characteristic of most folk cultures, where the material aspects of living are not advanced. This trait could very well be utilized by extension as an effective means of communication. In such cultures, ideas and techniques that are transmitted through formal, official, businesslike channels are likely to fall upon deaf ears and blind eyes. The people might do something in response to such an approach, but they would do it as a superficial gesture of compliance, rather than as the expression of a genuine, motivated desire to adopt the new practices.

The effectiveness of the personal touch is well illustrated by the following examples of statements that are heard in the villages of certain countries: "Here I come in person to appeal to you to do this, and I know you will not turn me away with an empty hand:" "For your sake, my friend, I will do anything; you order and I will obey:" "For the sake of my old beard, don't oppose this community project in which we have all agreed:" "This is not a usual order: it is a personal letter from the Director of Agriculture, appealing to each of us in this village to use the new improved seed. Surely we are not going to refuse him this request, which is also for our good:" "I was received by the Director of Education in person, who inquired about our village school. He said he was going to visit us upon the completion of the new school building. We have to finish the job soon now".

4. In simple folk cultures, demonstration is an important channel through which an improved technique can be transmitted effectively. These people don't have much of an economic margin that would permit them to experiment with new practices and take the risk of possible failure. Furthermore, they have not built up a tradition of faith in what is written on paper and what is proposed by central authorities. Consequently, the local demonstration of a suggested improved technique goes very far in convincing the people of the validity of the proposal.

5. An over-all appraisal of this process of communication reveals that each culture has two systems of channels and techniques, one developed and utilized by the scientific, technical, and administrative authorities, the other developed and utilized by the rural communities. Each of these is deep-rooted and firmly established among its supporters, with its peculiar equipment of material facilities, institutions, behavior patterns, and emotional content. The two differ from each other to one degree or another, depending upon the pattern

of the culture concerned. In the Middle East and in most Latin American countries, the degree of difference is striking, and represents the great gap that exists between the authorities and the great rural masses. One of the primary tasks of extension is to recognize and understand these differences, and then to work at bringing the two systems of communication closer, until they are geared effectively.

4. Continuous Appraisal as a Basis for Constant Adjustments in Programs

Extension programs will induce and introduce change, thus not only practices but social relationships and attitudes will be changed. To know in advance what all of these changes will be is impossible, and since some of them will be chain reactions, constant analysis is essential to necessary constant adjustments. If hostility develops at either the top or the bottom of the lines of communication or within them, the fact needs to be taken into account immediately. If it becomes apparent that lines of communication are not adequately carrying through from top to bottom or bottom to top because of leaks or blocks, quick rectification is essential in order to forestall hostility or discouragement.

The social scientist's role is constantly to observe, analyze, and understand these processes. To do so, he should not be in an administrative position, but instead be free to study all segments of the total process of change and made responsible for doing so. If his position is an administrative one, he will almost certainly be restricted to one segment of the process and therefore not be able to make the observations and recommendations of which he is capable. He should, however, be a staff person, free to communicate and advise with all responsible administrators and technicians, including those in the highest authority. In such consultation he is the specialist who should be depended upon for an understanding of the beliefs and attitudes that lie back of present practices, and which of these it will be difficult and which easy to change. He should also know to what extent science is being accepted and blended with folk knowledge. His analysis must be sufficiently precise and, especially, sufficiently current to spot chain reactions and keep the program in continuous adjustment. By no means the least of his oontributions should be a continuous appraisal of the extent to which the knowledge and desires of the people at the bottom of the channels of communication are travelling upward and being interpreted to technicians and administrators.

As important and essential as is the social scientist's advanced appraisal of social and cultural situations before programmes are initiated, far more important is his special role as a member of a team. It must be kept in mind that this team will include not only outside technicians but all the highest authorities and best technicians of the country and the leaders of the folk groups that extension programs are designed to serve. Because human relations are dynamic, the social scientist has learned that his chief task is to study people and programmes in action. To do this effectively, he must learn what the human relations, attitudes, and practices are before programs are launched and what desired changes are contemplated. He must analyze constantly what has happened to these human relations, attitudes, and practices in the process of change. Such an analysis is his greatest single contribution to the other members of the team on which he works.

Conclusion

In conclusion it should be stated forthrightly that to the extent that marked change (progress) is accomplished in the development of the natural resources and the economics of the underdeveloped areas of the world, drastic change in the social organization and established patterns of life of the people in these areas will also be changed. These patterns of life are sanctioned by beliefs that their customs and practices are good and to observe them is the right way to live. Leader-follower patterns will be changed, old social institutions will be disturbed, even religious beliefs will have to change. It is not impossible that more harm than good could result unless the changes are initiated and accomplished with the greatest understanding that can be obtained or developed.

The knowledge of sociologists, anthropologists and social psychologists will never be as exact as that used by the engineer or biologist, but a committee* of sociological scientists agrees with President Conant of Harvard who said "It is my belief that methods have already been developed to a point where studies of society by competent scholars can provide basic information to assist all those practical men who struggle with the group of problems we list under the head of human relations....powerful tools are in the process of being forged by the scientist who studies man as a social animal. These tools can be used to further or to destroy certain types of behavior and certain social patterns." 1/ With him we believe that policy markers in government, business and education must be increasingly aware of the assistance they can receive from those who study man and society. In no field of human behavior can they receive, or do they need, greater assistance than in programs designed drastically to change the economy and culture of the underdeveloped areas of the world.

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1/ Conant, James B. The Role of Science in Our Unique Society. Science, vol.107, No. 2769, Jan. 23, 1948. pp. 80 and 81.

Chapter 3.

EXTENSION ORGANIZATION

Organization involves the establishment of a system of harmonious and effective working relationships among people engaged in a common endeavor and their relationships with other individuals and groups engaged in complimentary activities. Its objective is the efficient use of human, economic and physical resources in accomplishing the purposes for which the organization is established. Harmonious internal working relationships are essential to the success of any organization. But when accomplishment of its purposes hinge upon the reaction of persons outside the organization, external relationships become equally important.

Agricultural extension services are established for the purpose of changing the knowledge, skills, practices and attitudes of masses of rural people. Schools, health services, regulatory agencies, churches, buyers of agricultural products, suppliers of production requisites and many other institutions and services are also involved in activities affecting rural people. It is the function of extension service organizations not only to establish a system of harmonious internal relationships but also to establish complimentary rather than competitive relationships with all other institutions, services and organizations contributing to progress in the rural community. In this chapter we will limit the discussion to external relationships. Internal organization will be developed under the heading of Extension Administration.

The work to be done is the basic consideration in determining the structure of any organization. The broader the scope of responsibilities and program of an extension service the more involved become relationships with other institutions, services and agencies.

An extension service whose program involves educational activity in marketing must develop a satisfactory working relationship with marketing agencies such as cooperative marketing associations and processors and purchasers of agricultural products. An extension service assigned or assuming responsibility for educational activities of rural youth must establish not only good relations with rural young people but also with schools, churches, boy and girl scouts and other agencies concerned with rural youth. Agreement with these agencies and institutions as to method of cooperation, definition of responsibilities and division of functions is essential if the best interests of young people are to be served and friction and duplication of effort are to be avoided.

Whether directly involved or not, an extension service should be concerned with all aspects of the welfare of rural people. But it should keep in mind that its role is educational and its program should compliment so-called action or administrative programs of other agencies, and cooperate to the extent deemed feasible and mutually agreeable in other educational programs. It is therefore highly desirable that the scope of responsibility and programs of the extension service and its relationship with other agencies be defined either through legislation or official statement of policy.

In the following article, Dr. J.Di Franco 1/ described the scope and responsibility of the extension service as worked out by a high level committee in the United States. The reader should bear in mind that in each instance extension's responsibility is strictly educational. Any operational activities involved such as marketing, public affairs and farm management will normally be carried out by other government or private agencies or by the people themselves.

1/ J.Di Franco FAO Paraphrased from "Guide to Extension Programmes for the Future" article appearing in the Agricultural Extension Service Publication, July 1959, North Carolina State College, Raleigh, North Carolina. U.S.A.

Scope and Responsibilities of Extension Services

Although programs may vary in detail from service to service, all extension services have areas of common interest. These areas of responsibility can be identified as:

1. Agricultural Production
2. Marketing, distribution and utilization of farm products
3. Conservation, wise use, and development of natural resources
4. Management on the farm and in the home
5. Family living
6. Youth development
7. Leadership development
8. Community improvement
9. Public affairs

The scopes of these areas of responsibility also vary between services. Logically, programs must reflect needs and priorities of the people with whom they work. This does not, however, negate the fact that extension personnel must be aware of the total scope and responsibility of their service. In addition it is as important that the National Administrative Unit to which the extension service is attached (i.e. Ministry of Agriculture) and the rural people should be adequately informed as to the scope and responsibility of extension. Only in this way can a cooperative and understanding relationship evolve and support an affective extension program.

To help in clarifying the scope and responsibility we need to define further the nine areas that have been identified.

1. Agricultural Production

A nation of rural people must spend most of its manpower and energy in the endless quest for food. Only when men and women can be released from this struggle for food is it possible to produce the other amenities that result in a high standard of living.

Thus the United States' fabulous economic productivity rests, in a very immediate way, on efficiency in agriculture. The place that efficient farming plays in that nation's economic well-being cannot be overlooked or slighted.

Interpreted accurately, efficiency means using land, labor, capital, and managerial ability in the best possible combination to be a marketable product with the least expenditure of productive resources and human effort.

The task is immensely complicated by the continual changes that are taking place in the technology of production, processing and distribution. Human food habits change - and this also affects the farm. Industry competes vigorously for the farm labor supply and also for markets. Urban needs compete for the land itself. Mechanization makes farming a major investment. Government programs affect the pattern of agriculture.

To cope with such complexities, farm operators are faced with major or minor adjustments every day of their lives. The extension service can serve agriculture and the whole economy by actively helping farm people make these adjustments wisely.

2. Marketing, Distribution and Utilization of Farm Products

Fifty years ago many agricultural marketing services were performed by the farmer himself. Today they are performed by thousands of highly specialized marketing firms, with little or no direct contact between the producer and the consumer. Increased efficiency of the entire agricultural marketing system is one of the major needs for developing economies. An organization which accepts responsibilities aimed at such a goal will need to work with the farmer and also with the processor, the distributor, the retailer, the consumer, and a host of others - to the mutual advantage of all.

Extension has made a good start (in some areas of the world) with an educational program in marketing, distribution, and utilization of farm products, but much is yet to be done. The objectives of this extension program are three-fold:

-To reduce the cost of marketing farm products
-To expand the market for farm products
-To help people understand the marketing system

3. Conservation, Wise Use, and Development of Natural Resources

The wealth of a nation depends upon the natural resources available to it, the determination and resourcefulness of its people, and the efficiency with which people conserve and use resources for the common good. The attitude of government toward resources is a critical factor. Few resources can be considered an individual's exclusive concern. His actions affect the lives of his neighbors and the lives of future generations.

Resource programs require two things that few individuals can give: Continuity over a long period, and full recognition of all interests involved, For strength and security, nations need farsighted action programs in the conservation and development of resources. Such programs will necessarily have a large element of group action. Success will depend on motivating people, involving them in policymaking, and stimulating them to act together for the common good.

Here the extension service has a unique opportunity. It can help individuals with their own problems of resource management. It can supply leadership and experience and specialized knowledge for community and regional resource programs. It can also develop a wider appreciation of the economic and recreational values of natural resources among all the men, women and young people it reaches in its other programs.

4. Management on the Farm and in the Home

Managerial skill has been defined as "the ability to make decisions that achieve goals in the most efficient manner."

For most people, wants are consistently greater than can be achieved immediately. This forces individuals to make numerous and frequent decisions on what resources to acquire and how to use them.

This is a fluid period for all nations - in production, in the variety and kind of goods and services available, and in occupational and population changes. People are involved in this changing situation. It vitally affects their business, their living, and the occupations open to them.

Where change is rapid and opportunities for choices are many, management plays a correspondingly larger role. The sheer bulk of management factors to be considered by the people today demands that management be given full attention by extension workers at every level.

Making decisions wisely is a skill which can be learned. It can be applied by the individual, the family, the group, and the firm. It can help assure better individual incomes, higher levels of living, and a generally higher level of ability to make decisions and confidence to carry them out.

5. Family living

Prior to the beginning of the twentieth century some farm institutes held in the United States featured information on family living. The well-known Country Life Commission in 1908 called for programs to improve family living. Then in 1914, the Smith-Lever Act charged the extension organization with the job of "diffusing" ...home economics and encouraging the application of the same..."

Modern advances in technology and the rapidly changing economy have had a strong impact on family living and have resulted in requests for new kinds of assistance from the extension service. Family economics, home management, buying, human relations, food and nutrition, clothing, housing, citizenship, health and safety, conservation, and problems of low incomes are some of the major areas in which extension now conducts family living programs.

Extension workers can use many resources to reach and influence numerous audiences in this area during the years ahead. Historically much of extension family living work has been done through homemaker's groups organized specifically for such purposes. These groups will continue to function and to adjust to newer needs and programs. Special handling will be needed, however, for such special audiences as the beginning homemaker, the working wife and mother, young parents, and the elderly or retired person.

To do such a comprehensive job in an efficient way, extension workers will need to enlist the aid of volunteer leaders, the mass media, and other agencies and organizations.

6. Youth Development

Four-H club work has been a successful method of working with young people for more than 50 years (in the U.S.A.). Priority has in the past been given to the needs of farm youth, but extension must interpret its responsibility as also applying to young people in rural non-farm homes and in suburban or urban families.

Today it is also becoming clear that if young people of all ages are to be served by the same youth program, it (the program) must recognize that needs differ at different developmental stages. A boy or girl from 10 to 13 looks for knowledge and skills - projects and activities in which he can do or build or achieve. At 13 or 14, interests become broader. Group activities are more important. Young people want to help plan their own program and take some leadership in it.

When formal schooling ends, another transition begins. Young people begin to seek information and guidance on careers, on college work, on marriage and on the other adult problems they are beginning to encounter. The young married couple is concerned primarily with establishing a home, a family, and an income. Extension must broaden its concept of youth work to make sure it offers all the service it is capable of giving to each of these four youth groups. It must also endeavor to make adults more permeable to problems of present youth and therefore willing to contribute personally and otherwise to programs seeking their solution.

7. Leadership Development

Seldom in history has leadership been more important than it is today. Because so many of the needs of modern life can only be met by group action, groups of every kind are assuming new significance. Yet no group can rise above the leadership at its disposal.

Leaders are the catalyst for group action, the voice for group expression, the tool through which the group considers and carries out its decisions. Almost everyone has the potential for some leadership. Furthermore, leadership can be expressed or exerted in many ways, Democratic groups often have a very high ratio of leaders to "followers", and the traits of leadership are showing their usefulness at every level in such organizations.

Finally, leadership can be developed. Extension work has long made a policy of trying to give people the resources necessary for leadership, the opportunities to assume a leader's role, and the experiences by which they can build their own self-confidence and earn the confidence of others.

The extension program has made a measurable contribution to the nation's fund of leadership. It can do much more. Those who develop leadership in the process of planning, developing, and carrying out extension educational programs have shown that they can also exert effective leadership in many other settings or situations. What more satisfying result can any educational program strive to achieve?

8. Community Improvement and Resource Development

Communities can be improved and their resources developed. This is the significant fact about extension community programs of the past, and it is the governing faith behind programs for the future.

A small rural community will often have strong geographical unity, and every resident will share in many common problems and interests. A larger urban center will provide the setting in which families with widely varying interests will live and work. Yet both "communities" will depend upon group action, on a community basis, to develop adequately their resources.

Extension workers will find themselves working with three kinds of community resources:

NATURAL - the land, water, climate, minerals, etc.

HUMAN - the people and their attitudes, skills and talents

INSTITUTIONAL - the schools, churches, markets, government groups, and other organizations and services which fill community needs.

In rendering its assistance, extension will serve many types of communities in a variety of projects. Yet its basic objective will always be the same - the development of people themselves, helping them to approach their potential in knowledge, abilities, skills, attitudes and appreciations.

9. Public Affairs

Public affairs education is education for citizenship. Its scope is measured by the educational needs of intelligent citizens concerned with public issues at every level of government. From the earliest years of the extension service, rural people have looked to it for help on controversial public problems. The tempo of economic growth and change, however, have greatly increased the need to give such help. People traditionally desire freedom from governmental intervention. But they realize that economic and social growth and progress create complex new public problems that may demand more governmental intervention, not less. World conditions, too, are increasingly complex. Extension is feeling today, more urgently than ever before, the demands for unbiased and factual help in public affairs. No one expects the extension worker to try to tell people what their decision should be on a public policy issue. What he can do is to help people study the economic and social consequences of alternative courses of action.

When extension teaches new technology it must also accept the responsibility to help society make the adjustments that will assure genuine benefits from such technology. This is a form of help which responsible citizens need and appreciate. It offers a challenge to which extension can and should respond vigorously.

Geographic, Economic and Political Factors Influence the Organization of Extension Services

The nature of extension education requires the organization to be in intimate contact with all segments of the rural population. Depending upon the scope of its assigned responsibility and program, it may well also work closely with urban people. Such a dispersed clientele, especially in areas where communication is difficult or slow, is often reflected in widely varying levels of education, social organization, customs and economic development.

Geographic factors exert the most obvious influence upon organization. Natural barriers, such as rivers without bridges and mountain ranges, separate settlements of people thus dividing the country into regions, districts or communities with separate organizational units for the conduct of extension work. Where such barriers have restricted communication for centuries, as in some parts of India, people in adjoining areas may speak different languages and have different social organizations. The irrigated valleys of Peru separated by strips of desert require separate organization of local leadership and services of separate units of the extension organization. Even more obvious is the difference in extension organization and method required to serve nomadic desert tribes as compared with occupants of adjacent intensively farmed irrigated areas. Continuous or frequent movement of nomads over wide areas result in a variety of social, economic and other problems in organizing and conducting an educational program. Communication with these people is difficult, expensive and intermittent. Contact must be on an individual or small group basis. Roads are usually poor or non-existent. Most nomads are illiterate so the written word is of little educational value. Few nomads have an opportunity for any formal education, let alone higher technical education. A field extension worker from a different background has difficulty in understanding their attitudes and in getting them to accept modern ideas and improved practices in agriculture and rural living.

Little success has been achieved to date in organizing an effective extension service for nomadic peoples. Some effort has been made in Egypt and other countries to eliminate the problem by settling these people on irrigated lands but few people have yet been settled. The French government initiated a system of service centers in North Africa before these countries achieved independence. Since the desert economy was based on livestock, centers were established at watering places frequented by nomads. Veterinary services were first established followed by attempts to improve grazing practices and production of fodder for supplementary feeding. This was a pioneer effort aimed toward fitting the organization of agricultural services to the desert environment.

Density or sparcity of population as a factor affecting extension organization is not limited to desert areas. In densely populated areas of India, Egypt, Indonesia and other countries, sheer numbers of people magnify the problems of social and economic change. Individual contact of all these people by the field extension worker is virtually impossible. In such situations the role of the extension worker becomes largely one of organizing people for group action in their own behalf and the training of lay leaders in developing and carrying out educational and action programs.

Size of a country as well as number of rural population affects the type of extension organization required. As a voluntary educational system, extension work must relate to local situations and problems. It is essential that field extension staff shall live in the community where they work. Technical support and supervisory staff must be readily available to assist local personnel with technical and administrative matters. In a small country, such supporting staff may be located in the capital city or nearby research station. In larger countries, the service must be more decentralized with greater local autonomy in the development and operation of the program. This is usually accomplished by establishing regional provincial or district extension offices staffed with program leaders, technical specialists and supervisors with a considerable degree of autonomy. It is essential in this system of organization to arrange for close communication between the central administration and the several regional or district office in order to have coordinated programs and policies. In Peru and some other countries, the daily use of two-way radio contributes greatly, to coordination and effective communication.

Climate can affect extension organization and program. In northern latitudes, farm operations are restricted during the cold winter months. This is a season when farmers have more time to read, plan and participate in community activities. The alert extension worker takes advantage of this opportunity for group activities including program planning, group discussions and various other educational events that would not be well attended while farmers are working in their fields. The summer program, on the other hand may consist largely of farm contacts, field demonstrations and the like. Rainy and dry seasons may have a corresponding influence in tropical countries.

School vacation periods often correspond with periods of intensive farm activity in rural areas. School teachers, especially those teaching agriculture and home economics, are sometimes employed as field extension workers during such periods. Others serve as lay leaders of rural youth group. In Switzerland, vocational agriculture teachers have major responsibility for extension programs while on vacation from their teaching duties. Although they do very effective educational work for short periods, this system does not provide for continuity of the extension program. To be most effective, extension programs require continuous direction by full time personnel throughout the year.

Economic Factors - Much has been said and written about the needs of rural communities in developing countries. These needs include basic education, sanitation, health facilities, nutrition education, better communication facilities and many others. These improvements must be included in any long range program of rural development. But the hard fact cannot be ignored that these improvements cost money as well as human ingenuity and effort. On a long-term basis, improved levels of living in rural communities can be achieved and maintained only through increased productivity and generation of capital. Public funds available from other sources can start a cycle of increased productivity and increased capital accumulation but the rural community cannot remain eternally dependent upon outside help. Countries vary in financial resources but few governments have sufficient resources to provide all the public institutions and services desired. This limitation is a very important factor to be considered in extension organization and administration. The basis of economic growth in most countries is its natural resources, usually agriculture. Therefore, the development of increasing social services is dependent to a high degree upon the improvement of agricultural productivity. This should be kept in mind by governments when allotting funds for agricultural extension services.

Economic factors affect the internal organization of the extension service as well as its relationship with rural people and public and private institutions and services. Financial limitations force extension administrators to organize their services on an extensive rather than intensive basis. To the degree that this forces extension to work through and with organized groups and to train and use lay leaders, this is desirable. However, a basic cadre of field personnel and supporting staff is required to develop and carry out an effective program, even with the most efficient use of personnel and other resources. If funds are not sufficient to provide this minimum organization, the extension administrator is faced with a decision as to how best to use his limited resources to achieve some impact upon rural communities. He has several alternatives. First he may spread his limited resources of personnel over the entire country in the hope that the few individuals contacted will influence others to follow their example. This policy has proven ineffective as it has resulted in very little change in levels of production or living in the community as a whole over a period of time. Contacts are too sparse and infrequent and too little attention can be given by the field extension worker to the follow-up of practices demonstrated.

A second alternative is to concentrate the expenditure of resources in the areas most likely to show results; for example, the best agricultural areas or the areas of greatest density of population where more people can be contacted at less cost. This policy usually results in greater increases in production and income for the area served and can be justified when food production must be increased at all costs to avoid famine. This policy was followed in Greece following their civil war. However, in normal times, the extension service should have for its objective improvement of the well-being of all rural people. Very often the majority of rural people live on less productive land such as mountainous or hilly areas. A service confined to farm families on the more productive land fails to accomplish this purpose and may lead to dissatisfaction and political unrest.

A third alternative is to limit the scope of the educational program to a few changes in agricultural or living practices considered of highest priority. For example, increasing rice yields or improving milk quality. This policy has the advantage of a possibility of immediate impact with appreciable results. But few practices in themselves can assure a higher level of living for the population. Increased rice production requires markets at fair prices if income is to be increased. Rice diets need protein supplements to provide better nutrition. Sanitary milk production requires equipment as well as a price incentive to encourage producers to improve their product. Although it is well to concentrate on high priority problems and projects, related problems can often slow down or prevent the accomplishment of expected results. In any case an organizational system which provides only for improvement of one or two aspects of agriculture gives no assurance that the increased income will result in better living in the community. It may be used to buy luxuries while children die of nutritional diseases.

Another organizational alternative has been followed with some success where funds and trained personnel were too limited to allow staffing of a nation-wide organization in the beginning. It is really a combination of intensive and extensive service. Adequately staffed and supported extension service units are established in a limited number of areas where sentiment is favorable and there is good possibility of achieving substantial results. An educational program is developed with maxium involvement of local leaders and contribution of local resources. These units are useful as training centers for additional personnel as they become available and as laboratories for use in discovering effective methods and procedures. With success in accomplishing goals and satisfying the needs of the community, people of other areas become interested. Their interest is aroused further by establishing demostration projects on a limited scale in these areas and showing these people how those of the original areas have progressed. Demand for extension services thus develops but is responded to only on the basis of maxium contributions of the communities themselves. Few governments can resist popular demand for extension services by large segments of the rural population, especially when the people themselves are willing to share in the costs. In this manner there can be a healthy growth of the extension service based upon sound principles of self-help and government assistance at minimum cost to the public.

Type of farming has an important bearing upon extension organization. Types range from shifting cultivation and subsistence farming through small holders, general farms, specialized farms and ranches, estate farming, cooperative farms, to corporate farms. Relationships between people and the extension service vary in each situation. The extension administrator and his staff have the task of organizing the service in such a manner as to provide the best possible environment for progress through education. Subsistance farming involves activities of all family members, official and informal community leaders, religious leaders, and possibly money lenders, buyers of products of the community and many others. To the extent that their services are available, schools and health services are involved. It is the goal of extension organization to maximize cooperation among and with progressive forces in the community and minimize friction with traditional elements. This can be done in at least two ways: first by providing for involvement of all affected interests in the development execution of programs and secondly by providing for research and training of extension personnel in dealing with such divergent groups.

Small holders and general farms involve many of the same relationship problems as subsistance farms but in addition these rural families are involved in credit programs, cooperative societies, primary and secondary schools, marketing organizations and other institutions and services. Extension's relation to these agencies become increasingly important. Here it is desirable that responsibilities and functions of agencies be delineated and basis of cooperation established at the national level. This may involve formal liaison arrangements and provision for cooperation of agency personnel on rural development programs at the local level.

Estate farming and corporate farming give rise to special problems in extension organization. Management of an estate is frequently in the hands of a hired manager whose goal is to show maximum profit to the owners. He feels obliged to reduce costs of operation and often keeps wages at a minimum. How can an extension service serve the interests of the majority of rural people without opposing the estate manager? This problem has never been completely solved but action has been taken in two directions.

In some South American countries, farm managers have formed associations and hire their own highly trained technical specialists to advise them in farm operation with or without government subsidy. Since their enterprise is usually highly specialized, the managers feel that the field personnel of the extension service are not well enough trained to solve their problems. The official extension service of the ministry of agriculture finds itself dealing mainly with small farmers. Workers on large estates receive little educational assistance aside from widely scattered programs for women and youth. These programs deal largely with gardening, handcraft for supplemental income, family nutrition and child care. The basic economic problems of farm workers are rarely touched upon.

A longer term approach to the educational needs of all the rural people is to involve land owners, managers, small farmers and hired laborers in consideration of the economic and social needs of the whole community; to show the owners and managers that it is in their own long-term interest to raise the level of living of the entire community, and develop educational programs combined with legislative and political action to achieve this goal. Agrarian reform is usually needed to make such programs effective. Unfortunately, up to this time little more than lip service has been paid to agrarian reform in many countries facing this problem.

Availability and types of farm supply and marketing services affect extension organization. Modern and progressive agriculture requires such requisites of production, as improved seeds, fertilizers, tools, machinery and equipment, pesticides, herbicides and the like. Without markets for agricultural products at fair prices there is no incentive for production, except for locally consumed products.

In most economically advanced countries requisites of production are supplied commercially, either through private enterprise or cooperative associations. Commercial agencies are highly competitive among themselves and with cooperative associations. This results in reasonable costs to the farmer. In addition, commercial firms and cooperative associations are furnishing increasing amounts of technical advice. Seed companies, dealers in fertilizers and farm machinery often employ highly trained field men to assist their customers in the proper use of their product and advise them on related problems. Vegetable and fruit canneries, sugar, coffee, tea and other processors of food and fibre products often contract with producers for certain grades and quantities of products. They also provide technically trained specialists who advise producers on details of planting, fertilization, harvesting and other practices involved in the production of a desired quality of product. Although this system is commonly employed in economically advanced countries, production of coffee, tea, sugar, rubber, cotton and other export products has long been carried on under this system in former colonies of metropolitan powers. A third type of commercial advisory assistance is provided by commercial farm management and consultant services, particularly to absentee landlords. The extension administrator must take into account the existence of such services in organizing and operating the official extension service.

Resistance to the efforts of commercial extension advisors as infringement of extension responsibilities has been a frequent reaction of extension personnel. They say that agents of commercial organizations are motivated only by profit for themselves and that their advice may not be reliable. On the other hand, commercial representatives say that the advice of the extension agent is too general and does not take into account the detailed knowledge of specialized crop production which the commercial agent can supply. Then too, the commercial agent, having responsibility only for his customers, as opposed to farmers in general, feels that he can provide more intensive service.

Rural people need more technical help than most extension services can provide. Lay leaders with a minimum of technical knowledge and skill are few, especially in less economically advanced countries. The reservoir of technical knowledge and energy available from commercial sources should be used to the greatest extent possible. Three elements are needed to assure effective use ot these services: (1) Confidence of farmers and extension workers in the reliability and good intensions of commercial advisors. (2) Cooperative attitudes on the part of both commercial and extension agents, and (3) An official policy of mutual cooperation on programs contributing to rural and agricultural development.

Confidence of farmers and extension workers alike in the reliability of advice from commercial agents will be increased if these agents are allowed to participate with extension agents in technical training conference where new research and advanced techniques are discussed. When both parties have access to the same information there is less likelihood of conflicting advice to farmers. Joint participation in extension training conferences will also contribute to the development of a desire for cooperation on both sides.

Perhaps the most effective instrument for establishing active cooperation and good will is the involvement of commercial agents with other leaders in the planning of extension educational programs. These agents have much to contribute in their own field of activity, and as citizens of the community their active support of other projects can be most helpful. In supporting such activities they are building good will for their product.

At this point a word of caution is necessary. An extension agent must show no favoritism toward one company or one brand of a product. If one product has given better results than another he should confine his staments in this regard to established facts and let the buyer decide which is better for his use.

The economic resources and progressive forces available from commercial sources should not be resisted or ignored by extension personnel. Such agencies have been largely responsible for the rapid and widespread use fo hybrid seed, fertilizers, herbicide and insecticide in the United States and other advanced countries. Many of these firms operate internationally. Ministries of agriculture should take into account the potential contribution of these firms to agricultural development and establish a system for effective cooperation.

National policy established in broad outline the organization of extension services. As previously stated, this policy statement or legislation should define the aims, objectives and scope of activities of the extension service thus affecting internal organization. The Smith-Lever Act of 1914 not only stated the purposes of Cooperative Extension Work in the United States but provided that the services should be administered by the states and that demostration agents should serve rural people in each county. But aside from extension organization other national policies affect extension work.

If the proposition is accepted that the ultimate objective of extension services is continuing improvement in the wellbeing of rural people, then any national policy affecting these people affects the extension service. Extension education is not an end in itself but one of many means of accomplishing this purpose.

National food policy is of overriding importance to rural people in most countries. A very large share of extension responsibility is in this areas. The extension educational program is expected to result in constantly increasing food production. National food policy determines the favorable or unfavorable economic environment for the accomplishment of this purpose. Government policy in respect to prices of agricultural products, is an important element of this environment. There must be an incentive before farmers will adopt practices designed to increase production. This has been a serious handicap in many countries. Allocation of national resources is another area of utmost importance. One country in North

Africa, having capability of producing most of its food requirements is presently importing about one-third of its food supplies because national resources are funneled into industrial and military development while agriculture is handicapped by a lack of fertilizer, machinery and equipment. Allocation of the use of foreign exchange, import and export restrictions, tax system, efficiency of transportation, land tenure system and many other conditions affect agricultural production and the effectiveness of extension education.

Political factors are seldom mentioned in relation to extension education. Extension is designed to serve all the people, regardless of political affiliation, and for this reason extension workers should not become involved in partisan politics. Political stability is necessary for continuity of extension education programs. Education is a long-term activity and it suffers when interruptions are frequent and prolonged. Changes in government administration, whether brought about through normal democratic processes or revolution, frequently result in complete changes in organization and personnel. In such cases, the extension service may, in effect, start afresh with inexperienced personnel, new policies and possible redirection of program. This may be good to the extent that the new administration is more effective than the old but too often the main results are loss of trained and experienced personnel, loss of confidence by the people in the ability of extension to follow through on its commitments and loss of time in bringing about needed improvements in production and rural living.

Most economically advanced countries have greatly improved on this situation by passing legislation establishing a continuing civil service and placing most government personnel under its jurisdiction. Employees are given tenure assuring job security with changing political administrations. All employees except top policy officials and their assistants are included. Policy officials are excluded to allow the new administration to put its own policies into effect according to its commitments upon assuming authority. Inclusion in a civil service system helps give continuity to extension programs and results in greatly improved morale of extension personnel.

Civic organization and administration must be taken into account in organizing an extension service and conducting an educational program. Extension education is based upon the assumption that rural people have the ability to act individually and collectively to develop and carry out programs for their own benefit. Authority for and experience in local self-government greatly facilitates this process. For example, the authority to tax themselves to finance local institutions and programs allows communities to progress as fast as their resources permit without waiting upon the generosity of a benevolent central government. Furthermore, locally financed administration is often less costly and more efficient then central government administration because it is carried out under the watchful eyes of the tax payers. However, in many countries, people in local communities are subject to authorities appointed by the central government, have no public funds except those allotted by that government, and have little knowledge of or experience in the operation of self-determined programs. This situation is common in a number of former colonies but exists also in countries ruled by small privileged minorities or dictatorial groups. Nevertheless, it is the aim of most governments, if not the established fact, to develop an increasing degree of participation of communities in local self-government.

Assisting rural people to develop and carry out programs for their own benefit is the very essence of extension education. Participation of local people in extension program development and execution affords invaluable training in decision making and in the processes of effective local government. The experience of a district in Kenya before independece provides a vivid example. The European district agricultural officer was responsible for agricultural development consisting mainly of tea and coffee production. He had organized a large number of cooperative associations to process and market the product. However, in an effort to assure efficient operation of the association he made all of the decisions himself. The directors of the association approved all these decisions without question. At about this time Great Britain announced that Kenya would be granted independence in the near future. The agricultural officer suddenly realized that should he leave the country the cooperative associations were likely to fail as their directors had no experience in management of their association's business. He decided to begin at once in turning over to the directors responsibility for all decisions. He refused from that day to make these decisions himself. At first the directors were bewildered. They had always depended upon the agricultural officer to make their decisions for them. The business of the organizations came almost to a halt. Finally a few directors began timidly to suggest action that should be taken. When the agricultural officer thought the suggestions were good he encouraged them. When they were considered inappropriate he raised questions. Guadually, the directors became increasingly active in discussing alternatives and suggesting action until they gained full control of their associations. At this stage the agricultural officer made this significant statement. "When Kenya gains her independence there will be a cadre of more than 200 directors of cooperative associations in this district with decision making experience who can provide civic leadership for local government." This is a type of extension work that can make a significant contribution to effective local government in many developing countries.

The Place of Extension in the Organizational Structure of Government

The place of extension in the organizational structure of government is a critical factor in determining its relationship with other governmental services and institutions. Three general types of organization may be identifies. The first and most common is placement of the extension service directly within the Ministry of Agriculture, although its director or administrator may report to a superior at varying levels in the administrative structure in different countries. The Extension Service in the United States of America is a cooperative service administered in each state by the official "Land-Grant" University and with a memorandum of understanding defining relationships with the Department of Agriculture. The Congress of the United States appropriates funds to the various states to defray a part of the costs of the service, provided the states submit acceptable annual plans of work and reports of accomplishment. A small Federal Extension Service, in the Department of Agriculture administers the allocation of funds, coordinates the program on a national scale and provides a certain amount of technical leadership. The system in Scotland is also administered by universities and financed largely by parliament.

A third system is employed in Denmark and has been followed with variations in some other countries. Here local extension services are sponsored and directed by farm organizations with re mbursement of much of the cost by the national government. Little or no control is exercised by the national government.

Each of the latter two systems is peculiarly adapted to the situation in which it was established. The Cooperative Extension Service in the United States brings together in each state the administration of extension. research and university teaching under one administrative authority, the Land-Grant University. All three functions benefit from federal appropriation through the Department of Agriculture, thus a degree of coordination can be localized to fit conditions in each state and research findings of the state and national research agencies are available to all state extension services on an equal basis. A possible weakness in this structure is difficulty in enforcing the execution of national policy. In fact, no enforcement is attempted. The national administration in the Department of Agriculture endeavors to get its policies carried out on their merits and through the strength of leadership of the national staff. Most officials and technical specialists of the Federal Extension Service have come up through the ranks of the Land-Grant Universities and have excellent relationshps with these institutions. The same is true of many other agencies of the Department of Agriculture. The farmer-controlled extension system in Denmark has a distinct advantage in being close to the people. Farmers consider it "their" service, as it is. Much practical experimentation is also carried on by the farmers association thus bringing practical research and extension together on technical problems which continue to arise. A weakness of this system is a lack of coordination of the programs of the various associations, and a lack of effective relationship with national agricultural teaching and research intitutions.

Since "Land-Grant" types of universities do not yet exist in most countries and since farm organizations are not usually qualified to administer extension and research programs. most governments find it logical to maintain their extension services as agencies of their ministries of agriculture.*

But where in the organizational structure of the Ministry of Agriculture should an extension service be placed? Several elements should be considered. Chief among these are (1) the role of the Extension Service as educational arm of the Ministry of Agriculture (if such is the policy), (2) involvement of the extension administrator in top policy formation, (3) two-way liaison with agricultural research agencies, and (4) wholesome working relations with all other agencies of the ministry concerned with agricultural and rural progress.

The role of the extension service as the educational arm of the Ministry of Agriculture is particularly appropriate as the extension service, through its field organization, is in close touch with all rural people. Extension field personnel who have properly established themselves in the communities enjoy the confidence of the people they serve. They are in the best position to interpret research findings to the people and to explain national agricultural policies. However, the extension service should not be expected or allowed to disseminate partisan political propaganda.

Envolvement of the extension administrator in top policy formation requires that his position be on a level parallel with other agencies whose directors are involved in policy consideration.

Liaison with agricultural research suggests the need for close association of research and extension specialists concerned with the same subject field. In this connection it is most desirable that specialists in research and extension have equivalent levels of technical training so they may meet as equals, each contributing to the solution of problems faced by farmers. Although each should have his well defined primary function and responsibility, cooperation in field extension activities and in the planning of research to solve practical problems should be encouraged. This can be done by including those functions in the job descriptions of both research and extension specialist.

Here we must face the fact that at present research specialists usually have a higher level of technical training than extension specialists. On the other hand, extension specialists who work more with people are, or should be, better qualified in human relations. The latter is usually the more difficult task and requires broader training. This competence should be respected by the research specialist.

Wholesome working relations with other agencies concerned with agricultural and rural progress may be achieved first by establishing the positions of their administrators on the same level, secondly by grouping related services to rural people under a single director-general, and finally recognizing the educational role of the extension service and requiring consultation with extension on educational aspects of other agency programs. For example a Department of Science and Education may include the Extension Service, Agricultural Library, and Agricultural Research Services. A department of Development and Conservation may include a Forest Service, Soil Conservation Service, Rural Electrification and other similar programs. A third category may involve regulatory agencies. The number and arrangement of such departments will depend upon scope of activity in the ministry program and the size of staff.

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* However, the Government of India is presently establishing a "Land-Grant" type of University in each state with United States' assistance.

The Relationship of Extension to Agricultural Teaching and the Technical Departments of the Ministry of Agriculture

Teaching of agriculture in schools and colleges, and agricultural research and experimentation are probably the two fields of activity with closest relationship to extension education. Obviously extension is dependent upon research for technical information to be interpreted and applied in the solution of agricultural problems. Extension personnel require technical training in agricultural science available only from agricultural schools and colleges. But the relationship goes deeper than this. A mutuality of interest does or should exist among practioners of all three functions.

In most developing countries, few young people from the farms and villages have the opportunity for secondary education qualifying them for matriculation in technical schools and universities. Consequently, most candidates for jobs in extension, agricultural teaching and the technical departments of ministries of agriculture lack rural background, common agricultural skills and understanding of rural people. All they know of such matters is what they have learned in school, But they in turn, become the teachers and technicians, further widening the gap between technical knowledge and its practical application on the farms and in the villages.

At least two lines of action to remedy this situation are apparent. Both should be taken concurrently. The first is to provide greater opportunity for rural youth to obtain higher education and the second is to relate higher agricultural education more closely to the job requirements of the graduate. Extension is more immediately concerned with this latter approach. Training of extension personnel is discussed in detail in Chapter 14. Relationships between extension and resident teaching need only be emphasized at this point.

Extension can give valuable assistance to faculties of agriculture in at least three areas; curriculum planning, course content, and practical field training, not to mention inductive methods of teaching.

Present curricula tend to emphasize theoretical training in basic sciences and technical agriculture. These are important for the potential extension worker as well as for agricultural technicians in other fields. But the extension worker needs something more. His main concerns are rural people and their problems. This involves such things as training in human relations, methods of informal teaching, decision making and the application of technical information in solving problems. The technical training of extension field personnel must be broad in order that he may deal not only with production but with all of the economic and social problems encountered by the villager. Since many prospective extension workers have little practical experience, instruction should include special emphasis on the common farm and home skills required for the application of modern farming and homemaking techniques.

Experienced extension personnel can not only assist faculties in developing effective curricula and course content for prospective extension workers but can provide some of the practical field training required. It is common practice in many advanced countries to assign advanced students in agriculture and home economics to jobs as apprentices or assistants to field extension workers during vacation periods. This not only provides needed practical training but may arouse interest in extension work as a career and desire to serve rural people.

All technical departments of ministries of agriculture have contacts with the public and require the dissemination of information to rural people. This type of activity can be considered educational if it is factual and is of interest to the people concerned. Insect and disease control programs require the active cooperation of farmers and villagers. Other ministry of agriculture activities such as collection of statistics, enforcement of quarantine regulation and surveys in preparation for irrigation and drainage projects require varying degrees of understanding and cooperation of rural people if they are to succeed. There is a natural tendency for directors of such programs and projects to proceed with little attention to the reaction of the people involved. This can result in suspicion, resentment and even the defeat of the project. Education is a key to acceptance and cooperation in projects which are beneficial and soundly conceived. It may be advisable to delay initiation of a project until people are convinced of its need.

Extension workers are trained in presenting unbiased facts and in organizing support for programs acceptable to the people. Rural people are more likely to accept as valid information from an extension worker who lives and works among them than from a stranger. In one instance with which the writer is familiar, government veterinarians issued an order that all cattle in an area should be tuberculin tested and infected animals slaughtered. This was one step in an area program to eliminate tuberculosis in cattle as a human health hazard. A few farmers accepted the testing as a government order but others offered violent resistance. The program would fail if any animals in the area remained untested. The veterinarians then requested the help of the extension agent. The agent discussed the merits of the program with rural leaders and with their help arranged educational meetings with farmers in each locality. When the farmers learned that they would receive indemnity for any animals slaughtered and saw the long-term benefits of eradication of the disease, they not only agreed to the testing but arranged to have their animals confined and ready when the veterinarian arrived.

Advance planning with the extension service can smooth the operation of many activities of technical departments. We must emphasize advance planning. An extension agent plans his educational program well in advance of execution. If he knows he will be called upon to assist technical departments with educational aspects of their work he can include these activities in his program much more effectively.

The director of the extension service can contribute to good working relations with technical departments by keeping in touch with their operations, checking periodically to see if there are projects planned where educational asistance is desired and relaying this information to this staff. Alternatively, this responsibility may be assigned to program leaders or specialists whose work is most closely related to the particular department.

Liaison between Experimental Stations and Extension Services 1/

Close and constant liaison between research and extension activities must be regarded as being of basic importance to agricultural programs. Failure to create such liaison can be seen to be a major factor in the failure of pilot activities to expand their results beyond their borders.

It is perhaps most realistic to assume that such liaison must first be achieved at a national level before very useful liaison can be expected at an inter-country level. For the purpose of this paper greatest emphasis will be given to measures for strengthening the links between each national extension service and the experimental station and pilot demonstration project presently operating or to be started in each of the countries concerned. The exact form these links take in our projects can be of paramount importance for it is our example that may well influence the entire pattern of liaison between the government department or research and extension in the future. In the past the fact has frequently been overlooked that each experimental and pilot demonstration project started in a country serves as a demonstration in the institutional field as well as in the technical field.

1/ G.C. Clark - FAO Regional Agricultural Education and Extension Officer, Bangkok

Importance to Research - By establishing good liaison links with the extension service, an experiment station can make sure that it is investigating problems of immediate importance to the farmer. This can go a long way to insure continued and adequate financial support from the government.

In addition, a close link with the extension service is necessary to insure that the promising experimental results receive adequate field testing under normal farming conditions. In the present projects most of the field or local adaptability trials are conducted by project staff on the pilot demonstration land surrounding each experimental station. Even with this arrangement, the cooperation and assistance of the extension service is necessary if field trials are also to be conducted on soils of different types and under different circumstances than those found within the pilot project demonstration area. It perhaps goes without saying that the more the extension staff can be involved in the final field testing of any recommended practice, the greater will be their interest in extending that practice to the farmers. The apparent failure of extension services to successfully extend the results of many irrigation plot projects must surely be shared by the research departments because of their failure to involve extension in the projects from the outset.

Importance to Extension - An extension service needs close and continuous liaison with the nation's experimental stations in order to keep its field staff up to date with latest recommended practices. In addition, such liaison can go a long way to insure that all recommendations have been adequately tested from the economic and social points of view. Both factors are of the greatest importance to an extension service if it is to earn and keep a good reputation with the farmer. Furthermore, an extension service must have a channel through which the problems of the farmers, particularly those farmers distant from an experimental station, may be brought to the attention of the research workers. Finally, it is exceedingly difficult for an extension service to suddenly assume responsibility for the multiplication of the results of a project in which it has not been involved and for which it has had little or no previous responsibility. Only through close liaison and involvement from the start will extension have adequately trained personnel and be sufficiently well organized to expand the results beyond the pilot area to a significant number of farmers.

Importance to the Farmer - Perhaps it is not out of place to mention here that it is the farmer who can benefit most from close and continuous liaison between research and extension. Conversely the farmers form that segment of the population which suffers most when liaison is inadequate. Too frequently the problem is seen only in term of its stilting effect on the experimental station or the extension service when in fact it is the farmer who is being made to bear, once again, the cost of others' mistakes.

Deliberate efforts need to be made from the start of a project to insure close and continuous liaison between research and extension. Unfortunately it does not "just happen" as a by-product resulting from the efficient operation of a project. Definite organizational and administrative arrangements need to be built into any project of this type. This may not be so readily recognized at the start of a project, where because of its smallness in size, apparently adequate liaison can be achieved on a personal basis.

While under ideal conditions of compatibility of staff, both national and international, such informal liaison may be easier, it is found to be inadequate when the project moves beyond its pilot stage. In other words we need to devise from the first a system of close liaison which is suitable for institutionalizing on a national and if possible an inter-country level.

The following organizational and administrative measures may be taken to establish and strengthen close and continuous liaison:

Appointment of Extension Training Specialist - Perhaps one of the simplest yet most effective measures which can be taken to increase close and continuous liaison between the experimental and the extension aspects of a project is by establishing a post for an extension training specialist. This expert and his counterpart should be attached to the national agricultural extension service but be located, at the project site.

The job of the expert would be two-fold: First in cooperation with the project subject matter specialists to collect the proven practices and prepare simple manuals, bulletins, leaflets and other visual aids for use in in-service training of extension staff and for inducing farmers to adopt the new recommended practices. Second to organize systematic and periodic in-service training courses for all extension staff in how and what to extend to the farmers. An important part of his training program would be to teach the extension staff how to utilize the project for farmer training. Unless definite steps are taken in a project during its period of operation to actively involve the national extension service personnel, the results of the project are frequently not multiplied throughout the country and the project remains as an island of development in a sea of need. Experience in many countries indicates that no other single post has such widespread and beneficial effect upon the medium and long-term success of a project of this nature.

Appointment of Subject Matter Extension Specialists - For countries having reached a stage of agricultural development where greater specialization amongst staff may be considered desirable and where there is a need for giving special emphasis to certain crops or improved practices, the creation of extension specialists for specific subjects has proven to be a useful measure for strengthening liaison between research and extension.

A subject matter extension specialist is responsible for keeping up to date on research development in his field of specialization, for the preparation of suitable training and extension materials on his subject and for training field extension staff in the latest techniques and recommended practices in his field of specialization. While administratively he should be part of the national extension service, he is best officed with the project research staff in order to facilitate the necessary close and continuous liaison.

Periodic Exchange of Information - There are several suitable methods for exchanging information. Experimental stations may want to take the initiative to organize periodic visits of extension staff to their stations. Such visits should be well planned in order to teach the extension staff the latest in the various subject matter fields covered by an experimental station. Officers responsible for pilot demonstration projects should also request the extension services to bring in selected farmers to see the result demonstrations. Further, the wide distribution of an information news sheet to all extension personnel, in an appropriate language outlining recent happenings and results achieved on a station, could also serve to strengthen liaison through increased understanding. In addition such a publication can provide publicity material for distribution to national news agencies, and senior government officials. The task of producing and distributing this news sheet by an experiment station could be lessened and liaison with the extension service greatly strengthened if the news sheet could be produced jointly with the extension service. In this case it would include news from both research and extension. An exchange of such information on an inter-country basis would also be useful provided it could be issued simultaneously in all languages involved.

Summary and Conclusions - Both the desirability and the necessity for close and continous liaison between experimental staions and pilot demonstration projects on the one hand and national extension services on the other, needs to be fully recognized by governments and technical assistance agencies alike. It is the farmers who suffer most when inadequate liaison is established between research and extension.

Suggested measures to promote the necessary liaison include: (1) Creation of joint research and extension coordination committees; (2) Appointment of extension training specialists for each project; (3) Appointment of subject matter extension specialists; and

(4) Periodic exchange of information through organized study tours and distribution of information news sheets.

Frequently, national extension services are poorly organized and understaffed. To by-pass them and set up separate but parallel extension units for each project serves only to further weaken their organization and make them that much less capable of successfully disseminating the results of the projects following their completion. The initiative, therefore, to establish and strengthen a close and continuous liaison between research and extension may initially have to come from the experimental farm and pilot demonstration projects themselves, as they are most aware of its vital importance to their own ultimate success.

The Relationship of Extension to Rural Elementary and Secondary Teaching

Two broad types of education are essential to economic development in agriculture as well as in industry. These are general education, usually conducted on a formal basis through schools, and technical and vocational training which may be acquired in a variety of ways ranging from individual unsupervised study to highly specialized training in universities and colleges.

Since a very large percentage of children in the less-developed countries receive no formal schooling and many others are limited to three to five years, great emphasis has recently been placed on the practical aspects of rural education. It is felt not only that elementary training in rural communities should involve examples taken from the everyday life of the student, but in addition, that he should be impressed with the dignity and importance of agriculture and its potential opportunities as a life work. In some instances, vocational training in the skills and knowledge such as gardening, simple shop work and weaving, which the student can use in his own community, are emphasized almost to the point of exclusion of more conventional courses. This approach has been criticized by some educators who charge that it does not train the pupil properly to assume his responsibilities as a citizen of the community, that it ties the pupil to his environment and does not allow him to prepare adequately for higher education, thus closing the door to his entry into other professions for which he might be better fitted temperamentally and intellectually. "But extreme emphasis on practical education is not the point of those who have complained that rural schools have been essentially copies of urban schools. Their point is that by tending to neglect the importance of farming and good use of land, schooling has encouraged an undermining of agricultural efficiency in many countries. Moreover, when presented in an unrealistic way, formal instruction in rural schools has often been too short and not good enough to make the children literate. The rural child should have as full and sound a basic education as the urban child, but it is contended that he will acquire it most easily and pleasantly if the materials for his lessons are the familiar things of the country and farm. Each country school should feel that it is an integral part of the rural community and that it has responsibility for, and a part to play in, agricultural progress." 1/

The importance of adequate education adapted to rural needs cannot be over-emphasized in relation to agricultural development. The modern farmer must be able to understand the elements of many sciences in order to apply the information constantly being made available by research workers to the solution of problems of production, processing and marketing. Basic elementary education is essential also to the proper functioning of vocational schools, extension or advisory services and other forms of rural adult training. Where the people are illiterate, those educational methods that involve the written word are not applicable thus limiting the teacher or extension worker very largely to the spoken word and personal contacts, and eliminating the use of many mass methods of education and communication. With the effectiveness of the extension worker thus limited, fewer farm families can be served per professional worker and the cost of the service is increased.

1/ Vocational Training in Agriculture, ILO, PP. 17-18.

In view of the above, extension education is vitally affected by the extent and quality of elementary and secondary education in rural communities. Although formal instruction in schools is not a function of the field extension worker, cooperation between school teachers, local education authorities and the extension agent can be mutually beneficial. The extension agent can supply teachers with simple but sound technical information related to local farm and home practice for inclusion in the course of study. Agricultural materials, such as leaflets, distributed to and discussed in schools find their way into the homes of students and may bring to the parents an awareness of opportunity for desirable change in farming or homemaking. Teachers are often the first rural leaders who are willing to assist the extension worker in introducing change. Rural youth programs such as 4-H Club work often have their start in rural schools with the teacher serving as local leader. Schools often provide a nucleus for broad programs of rural development with emphasis upon agriculture. At the national level, liaison between extension and school authorities is highly desirable. Their objectives are closely related and the establishment of a policy of cooperation can be highly beneficial to both.

Agricultural Extension in Relation to Other Rural Improvement Programs

As previously stated, extension education is only one, although an important one, of many community and agricultural services required for rural progress. Since each of these institutions and services has a role of its own to play it is highly important that extension's relationship be complimentary rather than competitive. Education is essential to the effective operation of all rural improvement services and without these services extension education, in turn, is defeated in attaining its primary objective of improved living in rural areas.

Cooperative Societies, usually considered an instrument of community action may also serve as an instrument of community organization for planning and implementing programs of extension education. Many well intended extension programs have failed because resources required to carry them out were not available to the people. Such resources might include among others credit, machinery, improved seed, fertilizer, pesticides, market outlets, processing facilities etc. Where such requisites are not readily available at reasonable cost cost from commercial sources cooperative action provides the best solution. This is the most obvious contribution of cooperative societies to extension programs.

But cooperative societies may also serve as an effective type of organization through which rural people analyse their problems, decide what they want to do and carry out plans to accomplish objectives they themselves have adopted. This is extension program development in its most practical form. Properly trained extension agents provide the professional leadership to guide this development and to coordinate the action of cooperative societies with the program of other agencies and community services.

When entrusted with the possibilities of community action through cooperative societies, extension agents sometimes take too much responsibility for their operation and management. The members are usually happy to be relieved of this responsibility but this practice is self-defeating. Not only does the extension agent find himself involved in a full-time job and neglect his primary educational role but the members become passive and disinterested. The extension agent's task is to provide educational and organizational leadership that will make the cooperative society a self-governing, self-sustaining organization as quickly as possible. When it is operating effectively, the extension agents role is entirely advisory.

Member education is a basic element for the success of cooperative societies. The extension agent can assist by bringing to the officers and members valuable technical, economic and organizational information.

Supervised Credit is a government service developed in recent years and designed to finance rural families who cannot obtain cedit at reasonable cost from conventional sources. Since few such families can give security in the way of land or property, loans are based upon a management program that will provide a living for the family and a surplus of income available to pay the interest and repay the principle over a period of time. A supervisor employed by the government assists the family to plan their farm operations and in the wise use of resources. He functions as both a financial and a technical adviser to the family. Aside from his role as lender and collector of money, he performs a very personal type of extension education, much more intensive in character than can be performed by the extension agent. His objective is the same as that of the extension worker but he works only with borrowers and has the capital available to finance improved practices on the farm and improved living facilities to the extent that the income of the family will permit. Informal education in better farming and living is a basic element in the successful use of supervised credit. Unless family income can be increased and wisely used the loan may not be repaid and the family is no better off than before. Experience in many countries attests to the success of this combination of credit and education.

Few governments have the resources to provide supervised credit for all who need it and many producers are ineligible or will not accept the required supervision. The extension service can collaborate with the supervised credit agency to the advantage of both. First supervised credit provides a means of financing the improved practices advocated by the extension service. Secondly the extension service can guide the supervisor in recommending to his clients improved farming and living practices adapted to the farming and living conditions of the area. Furthermore improved practices of the supervised credit clients can serve as demonstrations to convince other farmers of their value.

Money management is a critical problem among rural people in all countries. The credit supervisor becomes an expert in this field and can assist the extension agents with money management problems.

A variety of regulatory and administrative functions are performed by ministries of agriculture. They include enforcement of quarantine regulation; inspection of seeds, fertilizers and nursery stock; eradication of pests, disease and preditory animals; collection of statistics; operation of marketing boards and many others. Farmers are suspicious of activities of this nature as many of them have been punished when found guilty of breaking the laws and regulations involved. An inspector is usually an object of distrust and suspicion. For this reason an extension agent, whose success is based upon the trust farmers place in him, should not be burdened with regulatory duties. But he does have an important role in connection therewith.

Regulatory and administrative agencies perform services designed to benefit the public. Usually they are of long-term benefit to farm families. When rural people understand their purpose and potential benefit, they will ususally cooperate in their enforcement. Extension personnel can help bring about this better understanding as a part of their educational program.

Health Services are usually not a direct responsibility of extension service or ministries of agriculture but they are of vital importance to rural people. A high percentage of health problems are the result of improper nutrition, lack of sanitation and poor health habits. Extension education can help serve all three of these problems. This can be done by encouraging the production and consumption of foods needed in a balanced diet, conducting campaigns for the construction of sanitary facilities on the farms and in rural communities, and by teaching better sanitary practices in youth and homemaking clubs. A further contribution by extension is in helping communities organize to construct wells, water systems and sanitary facilities.

Veterinary services are provided through private practice in the United States and some other economically advanced countries but are a government service elsewhere. In many instances they are combined with extension work in animal husbandry and are conducted entirely separately from agricultural extension services. This frequently results in problems of coordination. Livestock production on the farm is so inter-dependent with crop production that education in both areas needs to be coordinated. A broader concept of agricultural extension including crop production, horticultur animal husbandry and related enterprises usually results in greater efficiency of operation and less friction. Under this system the central extension service provides support by employing specialists in each technical field and they in turn maintain liaison with their respective technical departments in the ministry of agriculture. Veterinarians are usually concerned chiefly with the control and treatment of animal disease and have little time for educational activity. Prevention of disease by environmental sanitation and proper care and feeding of animals is of equal importance. This is a proper function of the extension service. A further contribution of extension is the reporting of disease outbreaks to the proper authorities and in assisting veterinarians with educational phases of immunization campaigns.

Community Development and Extension Services are two official approaches to the task of rural development. Both have the same basic goal of better life and opportunity for mankind. They differ to some degree in philosophy, to a greater degree in form of organization, and especially in concentration of effort. Community development emphasizes group action in improving rural conditions. A high official of the Government of India stated that the welfare of the group superseded the welfare of any individual in their community development program. On the other hand, extension education emphasizes decision making by the individual and uses cooperation and group action to accomplish what individuals cannot accomplish working alone.

Community development is a more direct government approach working largely through official civic organization. Extension education emphasizes the development and use of informal leadership in achieving rural progress.

Community development emphasizes a concerted attack upon all elements of social and economic change on the theory that progress can be achieved best through a multipurpose approach. Extension concentrates upon the development of agriculture as the economic foundation for rural progress and upon concurrent improvement in family living.

Both approaches are employed in a number of countries, with friction sometimes developing. Thus working relationships become a matter of concern. In some countries community development is assigned the function of overall planning and coordination of activities in the various areas of health, agriculture, cottage industry, schools, transportation and the like at the national or state level, and for organization for community action at the local village level. Health, agriculture, home economics, schools, cottage industry, cooperatives and other specialized institutions and agencies are expected to carry out programs conforming to the overall plan through social action processes instigated by community development. Involvement of the executing agency representatives in the planning process is essential to their acceptance of responsibilities in executing such plans. Many failures can be traced to violation of this principle. A tendency of community development agents to carry out technical programs without the necessary technical competence can be equally disastrous.

Where food production is critical, as in India and some other countries, governments have found it necessary to concentrate much of their effort and resources on food production even though community development is the official approach. This indicates the importance of agricultural extension, whether conducted in combination with community development or as the principle educational approach to rural development.

In those systems where community development is to be the central coordinating agency for rural development, its location in the hierarchy of government determines to a considerable degree its working relationships with technical and other agencies concerned with rural progress. Education, agriculture, health, labour, cottage industries, housing, irrigation and land development, transportation and many other sectors of government each have a contribution to make to rural development. Also each administrator is inclined to be jealous of his authority over activities in his own area of responsibility. He is usually unwilling to accept the leadership of another administrator of his own or a lower status. For these reasons, the central coordinating authority needs to be placed in the office of the administrative head of government.

It is desirable for each technical agency of government to have the authority and responsibility for the development and execution of rural programs in its field and be held accountable for results achieved. Coordination of programs can be encouraged by mandatory consultation at all levels in the planning and at frequent intervals during the execution of programs.

In the final analysis, organizational structure, although helpful in achieving good working relations, is not as important as the attitudes, competence and dedication of personnel involved.

Agrarian Reform and Extension Education [1] -Much has been said and more will be said about the need and importance of ways and means of bringing about agrarian reform.

Agrarian reform is too often thoughtof as land reform. Naturally, land is a basic ingredient in any agricultural process. Unfortunately, too often land reform becomes an end in itself and not a means by which necessary changes are made. In fact, too many of us become so enthusiastically in love with the idea of land reform that we forget the past and future in trying to work out today's problems.

The problems of redistribution of land and reforms necessary to make for maximum production and efficient use of land and labour have been with us throughout history. One of the major reasons for war has been that of acquiring more land and resources. Very few nations in modern times have really solved the dilemma of living within man-made national boundaries as populations increase.

Redistribution of land is only one of a series of reforms necessary to bring about a better balance between man and the natural resources available. However, land and people are the most visible elements; therefore, it is easy to fall into the idea that what is needed is a law and scheme to move people, re-allocate land by redividing and apportioning it. Immediately it becomes obvious that there is not enough land and too many people. Of course this was the original problem, but in the pressure of time and with the miracle of laws it was forgotten until the actual action of moving people started.

At this point those responsible for making "land reform" a success became more concerned with executing the ideas rather than thinking of people. As the situation gets worse, leaders become frustrated and resort to the old adage that you cannot please all the people and that most people do not know that is good for them anyway. This leads to actions by force and, of course, eventually political and social changes are necessary to "satisfy" the people. Of such things revolutions are born, political schemes are developed and autocratic governments come into power.

This has happened many times over and yet we have not found a better approach to agricultural reform. It is my opinion that most agrarian reform programs fail because not enough attention is given to the other most important ingredient in the agricultural processes: people. Oh, yes, the immediate reaction is that this is not true. Is not the whole idea to improve the situation for the people, especially rural families? Is not this the main focus of the need and concern for agrarian reform? Of course it is. But it is my contention that after we pass the initial stage of stating why we need reforms the people are forgotten in the planning, development and operation of the reform program. I think there is sufficient evidence to bear this out in the high percentage of failure.

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[1] Joseph Di Franco, Extension Specialist, Food and Agriculture Organization of the United Nations, Rome, Italy.

It is not my intention to propose reform plans. It is my intention to draw attention to the people and how they can help in the problems that confront them as well as their political leaders. In fact, it is very obvious that before we can have agrarian reform it is necessary to have people reform. Or to say it another way, before we can bring about successful changes in agriculture we need to bring about changes in people. Professors would say it still another way: before we can bring about family and national welfare we must bring about economic, social and political changes. Of course, here again we get into a dilemma as to which one first, common sense dictates that we need changes in all aspects of human endeavour at the same time.

But how do we accomplish this as the world becomes more complex with exploding population, diminishing natural resources, increasing political units and more rigid man-made boundaries?

One way is through science: the development of new means of production, better seeds and livestock, use of scientific techniques and skills, more attention to maintaining and conserving natural resources.

Another way to attack the problem is through control of population: birth control and migration.

Another way is to redistribute the labour force by creating industrial machines to use labour to produce commodities needed by all and for developing an agricultural industry that produces more than it can use, therefore having food and fibre to trade for industrial products.

Another way is to create international agreements and alliances for trade: in effect this is more than trade of material goods, but a way of bridging national boundaries that prohibit movement of people by exporting (trading) labour in one country for goods in another.

But no matter what way, plan or approach is made, be it economic, social or political, they all involve people. And, unless a way is found to effectively involve the people, the results expected will only be temporary or will not be forthcoming.

The business of involving people has and is the main responsibility and objective of extension services. This educational institution can and must play an important role in involving people in making "reform" programs work. It is their business to change people through educational means.

If we accept the assumption that before you have economic, social, political or agrarian reforms we must have people's attitudes and opinion change, then education is an important and necessary element.

Since the reform programs deal directly with the adults, an educational organization and program must be developed for them. Extension education is a process that has proven successful in meeting this challenge. In fact, in some areas of the world extension organizations are given a prominent place in developmental programs and projects. The prestige of extension in the United States is based upon the fact that it is recognized as being a contributing factor to rural reforms and agrarian successes. It is also a major means through which people are educated to the facts necessary to changing them so that they become interested to the point of involvement in the planning, development and executing of the economic, social, political and agrarian reforms. Thus we have a partnership of the masses of people working with their economic, social, political leaders to develop and execute national programs aimed at solving problems. This is done through educational processes. Extension is one of these processes.

Legislation pertaining to Agricultural Extension Services

A legal basis for the extension service is essential in providing stability and continuity of the service. Such legal basis should be in the form of specific laws enacted by the national law-making body rather than vague references to this function in the definition of responsibilities of the ministry of agriculture, or ministerial decrees which are subject to the whims of each succeeding administration. An extension service has little status or respect without a legal foundation. The law should define the purpose, establish the method of operation, scope of responsibility and broad structure of the organization. In addition it should define the relationship of the service to other institutions and services and provide for continuing financing at a level commensurate with its responsibilities and scope of operations.

The survey of legislation pertaining to extension work in 52 countries in 1962 1/ indicated that about one-fourth of the countries surveyed had no legal provision for extension work. Over one-third were operating under general legislation establishing the ministry of agriculture and only 15 had specific laws or decrees providing a budget for operation.

Conclusions of this study suggested the inclusions of the following points as being of major importance in any extension law:

1. Provide for educational programs for the whole family - i.e. man, women and youth.
2. Provide for separation of educational and training work from enforcement of regulatory acts such as plant and animal quarantine, seed, feed and fertilizer quality inspection or distribution.
3. Provide for freedom from political involvement.
4. Provide for close affiliation and working relations with the research programs of the agricultural experiment stations and the teaching and training programs of the college of agriculture or agricultural institutes.
5. Provide for assurance or quarantine of financial support from year to year and for the future.
6. Provide for regional or zonal organization geared to the needs of the various areas.
7. Provide for advisory and planning groups to adapt programs to needs of the people and existing conditions in the area. This also involves local and regional people in the extension programs and develops and trains local and regional leadership.
8. Provide for local and regional participation in financing local and regional extension programs.

Sound legislation and adequate financial support are essential in building any public service and in providing it with a dedicated and well trained corps of workers. Extension services are no exceptions.

1/ Legislation for establishing agricultural extension work in various countries. USDA/AID 1962.

The extension law in any country must fit the legal structure and civic and social organization of that country. Hence any recommendation of a model law is of doubtful value. Furthermore, it must be borne in mind, that the enactment of a law does not automatically establish an effective extension service. It merely provides a legal foundation upon which to build the structure. The method by which it is implemented is of even greater importance.

Some Common Deficiencies in Extension Organization

Deficiencies in the organization of agricultural extension service stem primarily from six sources.

1. Lack of general understanding and appreciation of the role of extension education in rural development.

2. Failure to establish a national policy as to the scope of extension service responsibility and program.

3. Lack of continuity of extension program due to political instability and attendant changes in agricultural policy, personnel and priorities in economic development.

4. Weaknesses in the organizational structure of government which inhibit the development of cooperation between agricultural extension and other government services and institutions.

5. Failure to provide an effective balance in the allocation of limited resources among the necessary elements of rural development such as extension education, agricultural research, credit, agrarian reform and other elements of agriculture modernization.

6. Failure to provide a proper balance between technical and educational competence in the staffing of the extension service.

Section II EXTENSION PROGRAMS

Chapter 4

EXTENSION PROGRAMS IN AGRICULTURE

Program as used here is a statement of purposes and objectives of an organization together with a description of the situation, statement of problems and proposed solutions. It defines clearly the scope of activity of the organization so that all people affected will understand its purposes and objectives and their part therein. Since extension is essentially an educational activity, extension programs are educational in nature and employ educational methods. As previously stated, extension is concerned with changing the knowledge, attitudes and actions of rural people through educational means. This chapter deals with such changes in agricultural practice.

Food and clothing are basic needs of civilized man. Agriculture by providing these elements is basic to the economy of any country. With the exception of a few countries with rich mineral resources, most must depend upon agriculture not only as a source of food and fibre for consumption by its own population but to generate foreign exchange and contribute to capital formation. Individually and as a community, rural people must produce a surplus of food or fibre for sale to pay for educational, health and other services and for products and goods not produced locally which are required for an acceptable standard of living. Extension programs in agriculture are concerned with educational aspects of agricultural development and agricultural development involves man interrelated elements. As Mosher 1/ says, "one of the main tasks - is to find ways of farming that farmers of typical ability can use effectively if only they will learn a little more and develop somewhat better skills." This is a task for agricultural research, extension and policy makers, working together, to accomplish. Mosher states further - "For agricultural development to occur, the knowledge and skill of farmers must keep increasing and changing. As farmers adopt more and more new methods, their ideas change. They develop a new and different attitude toward agriculture, toward the natural world that surrounds them, and toward themselves. Their early successes in increasing production increase their self-confidence. Their increasing contacts and transactions with merchants and government agencies draw them into closer acquaintance with the world beyond their villages. They increasingly become citizens, full members of the nation." This is a basic purpose of agricultural extension in its truest sense.

Agriculture Involves Men, Women, Youth and Villagers

Agriculture is still a family enterprise in most areas of the world. Women and youth not only perform much of the labor involved but help decide what shall be grown and how. Women do much of the marketing and purchasing for the farm and family. In more advanced societies, women often keep the records and have a voice in decisions involving expenditures. Needs and wants of the family have high priority in the use of the available funds, often coming ahead of production expenditures. In traditional societies few changes in farming practice can be made without the concurrence of the family and in some cases, the whole social group must concur. Young people are less conservative than their elders and hence are more likely to experiment. With education they become successful innovators. Many improved farm practices are accepted and tested by young people through youth clubs and when proven successful they may be adopted by their elders. Some early experiments with farmer training centers in Kenya failed to bring about the adoption of the improved practices taught, becouse wives and children of the returning trainees ridiculed such new-fangled ideas. But when women were later included in the training program they adopted the new practices with considerable enthusiasm. Women are traditionally responsible for the health and nutrition of the families and training of the children. People suffering from illness, malnutrition and parasites are physically incapable of hard farm work and are not receptive to new ideas. Better living for rural people is the ultimate goal of extension education. Improved agricultural production is the only available means of achieving economic aspects of that goal.

1/ Arthur T. Mosher - Getting Agriculture Moving - Agricultural Development Council, New York - Introduction p. 10.

Not only the farm family but the rural community as a whole is concerned with and should be involved in agricultural development programs; first as a source of food and fibre, secondly as a means of employment of labor and finally becouse agricultural development requires group as well as individual action. Processing and marketing of agricultural products, supply of necessary requisites of production, education of children and many other functions all have a direct bearing on production and require joint effort. For these and many other reasons, extension programs in agriculture need to involve women, youth and the rural community.

A national extension program in agriculture provides the framework within which regional and local programs are developed. It provides an analysis of the problems of agricultural development, describes the areas in which education is needed and defines the scope of responsibility of the extension service in this field. Such a program not only guides extension personnel in their activities but justifies the expenditure of public funds for this purpose.

The Scope of Extension Programs in Agriculture

Nine areas of responsibility of extension services were described in Chapter 3. The first four relate directly to agriculture. These areas are: (1) agricultural production (2) marketing, distribution and utilization of farm products; (3) conservation, wise use, and development of natural resources; and (4) management on the farm and in the home. An effective extension program in agriculture will establish goals in each of these areas with due consideration of priorities.

Agricultural production* is often emphasized, to the exclusion of the other three areas mentioned, in the programs of extension services which are in early stages of development. Abundant food supplies have the highest priority with people and with government. "Make two blades of grass grow where one grew before" was a slogan of the Cooperative Extension Service of the United States during its formative years. People and nations who have experienced famine are especially conscious of the need to produce a surplus of food for use in years of low production.

In developing countries with 50% to 70% of the population employed in agricultural production as compared to 10% to 20% in the economically advanced countries, food shortages are a common occurrence. Those foods which are available are usually low in protein content and variety and do not provide a balanced diet for the populace. Rural per capita income is low as a result of low productivity.

The broad objectives of agricultural production programs may well include:

1. Selective increases in the production of those crops and animal products needed for adequate nutrition of the populace and a surplus to the extent it can be profitably exported.

2. Increases in production of fibre crops to the extent needed for local consumption and export at a profit.

3. Increased efficiency of production thus reducing costs in money and human effort and releasing manpower for the development of domestic industry.

4. Improved quality of agricultural products to meet the demands of local and export markets.

5. Reduction of losses due to insects, disease and spoilage.

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* Agricultural production as used here includes crops and livestock production, horticulture and inland fisheries. Farm forestry as it affects rural income is also included.

Educational needs of the farmer in relation to agricultural production include training in the practical application of all the natural sciences, the economics of production and distribution, cooperation with his fellow producers, and skills in a multitude of improved farm practices. Agricultural extension has the task of helping farmers become aware of the production potential of their resources, bringing them technical knowledge and helping them apply it in the solution of problems and training them in related skills.

Marketing, distribution and utilization of farm products determine to a large extent whether they are produced at a profit or at a loss of money or at least of human effort. A national program for the marketing of agricultural products is first concerned that products shall be produced of a kind, quality and in the quantity which the market (local, domestic and foreign) will absorb at the time they are needed. The local and domestic markets will absorb only certain quantities of various agricultural products of acceptable quality. Superior quality products of certain kinds such as vegetables and fruits will sell in larger quantities and at higher prices. Products sold abroad are in competition as to price and quality with the products of other countries and must meet certain minimum grade requirements as well as to pass inspection on arrival as to freedom from disease and spoilage.

A producer in Egypt, contracted to deliver a certain quantity of fresh tomatoes of a certain grade to the European market on a specific date in the winter when fresh tomatoes were scarce and in demand. The producer first had to be sure he planted a variety adapted to conditions in Egypt and of a quality required in his contract. Next he must investigate transportation to determine how he could get the tomatoes to Europe in good condition. Air transport proved to be most feasible. Then he must develop a time schedule for preparing the land, starting the plants, growing them out, harvesting, packing and shipping in order that the product would be delivered on time, and start his plants accordingly. During the growing season he must cultivate, irrigate, spray to control insects and protect from depredation to assure the production of a high quality product. He must pick the tomatoes at the right stage of maturity, train his workers to handle the tomatoes carefully to prevent bruising, grade them for size and uniform quality and pack them to withstand handling in shipment; and arrange transportation to assure delivery on schedule. Similar functions must be performed to a greater or lesser degree with many agricultural products in order to realize the greatest profit. The extent to which these functions are performed by the producer varies with the product and with the sophistication of the marketing system but regardless of who performs them they affect the sale of the product and returns to the producer. In many cases marketing, processing and distributing functions can be performed more economically and effectively by a cooperative association in which the producer shares in the profits or savings in addition to assuring efficient handling of his product.

Educational needs of producers regarding marketing, distribution and utilization are many and varied according to the product involved and the circumstances of the individual. Some of the more obvious include:

1. Information supplied periodically on the present and potential market demand for products that can be produced in the area and seasons of greatest demand.

2. Information on high yielding varieties that will meet quality requirements.

3. Training in cultural practices that will assure high yields and a uniformly high quality product.

4. Skills in harvesting and packing.

5. Quality control in the handling of the product.

6. Educational assistance in cooperative marketing and processing.

7. Attractive display and packaging (in case the producer retails his product on the local market).

8. Price information during the marketing season.

Conservation and Wise Use of resources is of national importance to every country. Its importance is not as apparent to the individual who is deeply involved in the immediate problem of providing a living for his family. Few poor and illiterate farmers are accustomed to thinking in terms of measures that will conserve natural resources for use 10 years later let alone for the use of future generations. Evidence of exploitation and waste of natural resources is recorded throughout written history and is present today in most countries. Parts of Northern Africa which were once described as the bread basket of ancient Rome have since reverted to desert. The valleys of Peru are said to have once supported several times their present population. The New England area of the United States when denuded of its forests soon lost its top soil through erosion, farms became unproductive and farm families had to move west to new lands. The recent population explosion emphasizes the importance of conservation and wise use of resources in order that constantly increasing numbers of people may be fed and clothed. Because conservation involves the wise use of resources over time, and requires joint action by large numbers of people, governments have found it necessary to enact conservation laws and inaugurate conservation programs. Conservation involves the preservation and wise use of those resources necessary for maintaining an acceptable standard of living for the people. It includes such objectives as reduction or prevention of soil erosion; conservation of water and prevention of pollution; preservation of species of plants and animals threatened with extinction; maintenance and regeneration of forest resources; development of areas for hunting, fishing, camping and other recreational activities, and preservation of the natural beauty of primitive areas for the enjoyment of all future generations. Although government leadership, investment and action are necessary to the accomplishment of these objectives, cooperation of individual farmers and all citizens is equally important. Laws and regulations in regard to the conservation of resources can be enforced only to the extent that people appreciate their usefulness and accept them as being in their own best interests. Agricultural extension programs in this field are directed to: (1) informing people of the value of and need for conservation, (2) assisting people to use their own resources wisely so as to provide the best possible living for themselves and their descendants, and (3) motivating people to do their part in achieving national objectives.

Management on the farm involves numerous and continuing decisions as to alternative uses of resources in an effort to maximize productivity and farm income. A farmer, at any given time has at his disposal a certain amount of land with certain characteristics, his labor and that of his family, and varying amounts of capital (money or credit) to use in exploiting his other resources. In modern agriculture each of these production requisites can usually be expanded or reduced. He may buy or rent more land or reduce his holdings. He may employ more or less labor and he may intensify his operation by employing irrigation, double cropping, greater use of fertilizer by producing higher value crops or by processing his products rather than selling them unprocessed. These latter functions usually require greater investment of capital and labor. In primitive agriculture the alternatives may be limited for a variety of reasons such as limited land resources, unavailability of credit but to a very large extent because the farmer does not know of alternatives or how to use them. In some cases alternatives are available as a result of research and experimentation in crop and animal production. Irrigation development may make possible the growing of new and profitable crops. A new cheese factory may provide an expanded market for milk. A trade agreement with another country may provide a profitable market for certain fruits or vegetables The higher agriculture is developed the greater the number of alternatives faced by the farmer and the more managerial ability is required. The farmers decisions involve not only the use of available resources (funds) for agricultural development but their allocation between production and family living; between current operations and expansion of the production plant (more acres or livestock or development of irrigation for examples). The soundness of his decisions are usually related to the soundness and completness of the information on which they are based. Records of farm activities, yields of crops and livestock products, costs of production and profit or loss of each enterprise provide useful guides in making decisions.

Educational requirements relative to farm management involve: (1) analysis of resources available to the individual farmer and the community; (2) training in decision making based upon available alternatives; (3) information on new alternatives developing as a result of research, changes in demand and new agricultural developments such as irrigation projects; (4) assistance in keeping records; (5) assistance in analyzing records and using them as a guide in making decisions; and (6) money management, use of credit etc.

Farm management is an essential element in the training of farmers on land settlement projects. Most such settlers have little if any experience in managing their own farms having worked as laborers under daily supervision.

National extension programs in agriculture can establish the broad areas of extension responsibility and activity which are of concern to the masses of rural people and contribute to the national welfare. They may also take into account national economic and agricultural policy and assure that these policies are considered in the formation of localized extension programs.

Extension Programs in Agriculture must be Localized to the Region, the County and the Community

"We are inclined to overlook the fact that development not only happens to people but that it happens to them one at a time." 1/ Agricultural development takes place on at least thousands and probably millions of farms in any given country. To be effective extension education must meet the needs of these masses of people, facing a great variety of problems. Farms vary in size, in the basic character of the land, in soil fertility, in degree of erosion and adaptation to crops and farm enterprises. The types of farms that are appropriate for primitive agriculture are not the types that are most productive when modern methods are applied. Varying soil types and climatic conditions require specially adapted crops and varieties. Communal grazing of livestock gives rise to land management problems not faced by stockmen grazing their own land. Establishment of crop rotation and soil fertility practices must be preceded by land consolidation, establishment of property rights and enclosure of fields in order that the individual farmer will be able to control his enterprises and reap the benefits of improved practices. This leads to the logical conclusion that extension programs must be developed to fit the local situation. Although situations, problems and needs vary from farm to farm or village to village, people in a contiguous area have many problems in common.

As indicated in Chapter 3, administrative units of the extension service need to be established to serve areas with common interests and needs. Boundaries of political units, such as counties in the United States tend to cut across types of farming and problem areas and are not the best units for agricultural program development. But other factors than type of farming are involved in the common interests and needs of people. Social and political factors may be more influencial. Thus a compromise may be called for in setting up local administrative units of the extension service. It then becomes an important function of extension supervisors and subject matter specialists to coordinate programs between areas served by different extension units.

The important role of local extension programs cannot be over emphasized. This is where the extension service succeeds or fails in changing the practices and attitudes of rural peoples.

1/ R.L. Bruce - Organizing an Extension Service for Development - Community Development Journal, Oxford University Press. April 1968, vol. 3, No.2.

Agriculture as an industry differs in many respects from other industries and professions. Since production processes in agriculture are growth processes, they are subject to many natural phenomena which cannot be controlled to the extent production processes are controlled in a factory. They are affected by temperature, rainfall or lack of it, wind damage, and many other factors about which little can be done. Soils vary from farm-to-farm and from field-to-field. They vary in fertility, in soil texture and structure, in topography and as a result of previous tillage practices. Animals vary in their capacities to produce meat, milk, eggs or to do work as a result of hereditary and environmental factors.

Farmers are first of all a product of their respective environments. They have learned to survive by following the farming practices taught them by their forebears. Farmers experiences reflects difference in land, sizes and types of enterprises and successes and failures in the past. Consequently their reactions to innovations will vary. Farm families vary in size, in proportion of sons and daughters, in the state of health of family members and in level of education.

Farming is a business dependent upon markets, farm supplies, transportations and other services which are available in varying degrees in each community.

Because of these variables, programs for agricultural development must be tailored to general conditions in the area, then to the specific farm and farmer. Practices which are successful in one area or even on one farm must often be adjusted to be applied to another farm by another farmer.

The time factor is important in agriculture. Crop production is seasonal. There is a limited time span when crops may be planted. Tillage must be done when soil and moisture conditions are favorable. Insect pests can best be controlled at certain stages of development. Thus individual crops require large imputs of labor at certain seasons and none at others. Diversification of enterprises provides more efficient use of labor in addition to its other advantages. A single most profitable crop or enterprise may be less profitable than a combination making more complete use of land and labor.

Farming requires a wider variety of skills than almost any other industry and utilizes more branches of science and kinds of technology. Furthermore technology is constantly changing. Agricultural programs must provide not only the training in basic skills and technology of modern agriculture but must keep this knowledge up to date.

Each change in practice calls for additional changes. Higher yielding hybrid seeds require more fertilizer and water to achieve their potential production. With irrigation and fertilization, closer plant spacings will result in higher yields. Where animal power is used, crops are spaced wide enough for the horses or oxen to walk between the rows. With mechanical cultivation the rows may be narrower. A new crop may be highly productive but have no value unless processing facilities and markets are provided.

An extension program in agriculture must take into account all of the above and other variables. They affect priorities in the selection of goals and targets. They determine to a considerable extent the educational needs of farmers and villagers in relation to the goals selected and the teaching methods to be used.

A local extension program in agriculture, to be most effective represents agreement among rural leaders, local extension workers and their supervisors and subject matter specialist upon: (1) problems, needs and goals for agricultural development in the particular area, (2) farmer education required to solve problems involved in achieving selected goals, (3) the application of national agricultural policies to the area, and (4) method of coordination with the programs of other organizations and agencies with related functions and goals.

Such a program describes the situation as it exists at a specific time and serves as a benchmark against which to measure progress at a later date.

Agreement upon all proposals for a program is not to be expected. But thorough discussion of all aspects of a situation reveals those aspects where united action is feasible. Participation of rural leaders is especially important. Their opinions and reactions to the opinions of others, indicate their understanding of problems and where the educational program should begin.

Consider these Factors in Deciding on a Program

Methods of extension program development are discussed in Chapter 10, but local extension programs in agriculture must take into account a number of important factors including but not limited to the following:

1. Natural and physical resources of the area such as soil, climate and adaptation to specific types of crop and livestock production.
2. Problems hindering effective exploitation of these resources, such as low fertility, eroded soil, low yielding varieties and breeds of plants and animals, insect and disease problems, shortage of rainfall at the time required, inefficient cultural and livestock production practices.
3. Technical information applicable in the solution of these problems and its adaptation to local conditions.
4. Economic and social factors contributing to low productivity, such as land tenure system, available markets for products of the area and prices received, transportation facilities, levels of and opportunities for education, the health situation and current programs for improvement.
5. Availability of such requisites of production as capital, credit, labor, water for irrigation, fertilizer, farm machinery and equipment, improved seed and breeding stock.
6. Numbers of families involved and areas concerned with each problem or proposed project.
7. Agricultural and economic policies and programs of the central government.
8. Financial, physical, technical and personnel resources of the extension service.
9. Present level of technical competence of farmers.
10. Experience of people in cooperative and self-help programs.
11. Wants and aspirations of the people as compared to their immediate and long-term needs as seen by the extension staff.
12. Experimental and research institutions available to help solve technical problems.
13. Opportunities available to farmers to improve productivity, reduce costs or increase farm income.

Determine Priorities

An examination of the above-mentioned factors by the extension staff in consultation with community leaders will usually indicate certain priorities. An FAO specialist was assigned the task of assisting the government of a south-east Asian country to improve the quality of rice. His observations soon convinced him that the long delay between harvest and threshing resulted in significant deterioration due to mold and insect damage. The delay resulted from a long period of waiting for the favorable winds employed in winnowing the paddy. The expert solved this problem by attaching a fan to the drive shaft of an old tractor used for road grading, thus providing an artificial breeze across the threshing floor. It worked so well that he called in neighboring farmers to demonstrate this practice. Very quickly he had a pile of exceptionally clean bright paddy. He then asked the grower what he thought of the idea. The owner merely smiled and threw a handful of dirt into the pile of clean paddy. The surprised expert asked the grower why he did this. The grower explained that the government established a price for the rice which was allowed to contain a certain percentage of foreign matter. He wanted payment for that percentage. Before a clean rice program could be accepted by growers it needed to be preceded by the establishment of a price system based upon grade with a differential in price according to quality and purity.

Priorities are also affected by the seriousness of the problem, the number of families involved, its importance to the general public and values and beliefs of rural people. Number of cattle are status symbol in some societies. This is a significant problem in dealing with areas of over-grazing where cattle numbers must be reduced. Any reduction in cattle numbers may require a prior change in beliefs and values of the people.

Families in backward societies seldom give high priority to a clean, safe milk supply until they learn that milk is a carrier of serious bacterial diseases. In this situation an educational program on health and sanitation may well precede a clean milk campaign.

Focus Extension Programs where Results are most Promising

Focus is an essential element of agricultural extension programs. By focus we mean concentration of effort on one or a very limited number of projects until substantial progress is achieved. Often a single project, such as introduction of a new variety of wheat or rice, will require maximum effort and constitute the main focus of the extension program over a period of time. Too often, an extension worker will see so many different phases of production that can be improved, or so many small practices that are inefficient, that he dabbles with many and shows little progress in improved productivity of any agricultural enterprise, Rural people and agricultural policy officials see little benefit from his services. Both the individual extension worker and the extension service he represents acquire a reputation for futility.

Dramatic results on a broad scale are especially important in developing countries with primitive agricultural practices. While farmers practicing a highly developed and specialized agriculture are pleased with a 5 % to 10 % improvement in already high yields, such increases may not be recognized by illiterate farmers who must judge results by appearance rather than accurate records. On the other hand, dramatic increases are much easier to obtain from low basic yields. The dramatic results achieved with Mexican wheat varieties in Turkey, Tunisia, Pakistan, India and number of other countries attest to the value of focusing extension and other resources on a single project of proven potential.

A single project which profoundly affects agricultural production in a community, a region or in a country often requires the marshalling of many different resources. A wheat variety project starts with the research to develop varieties with desired characteristics.

Demonstration and testing under varying conditions must prove its adaptation. Additional fertilizer and irrigation may be necessary. Seed must be available and marketing must be provided for. Insect and disease hazards must be anticipated and insecticides must be available at the time needed together with the necessary equipment for their use.

Such a campaign requires concerted effort by many agencies and institutions, but it also provides an opportunity to establish good working relationships among these institutions and services. All can share the credit for success. Such extreme concentration of effort on one crop or enterprise can be justified (1) when the project is of potential importance to large numbers of producers and to the economy of the country, (2) when the practicability of the project has been demonstrated through research and testing under the varying conditions existing in the area, and (3) when all the necessary resources for execution of the project can be assured. Without these prerequisites the project is almost sure to fail.

But such a spectacular breakthrough as a Mexican wheat or a high yielding dwarf rice do not happen with any regularity nor are they adapted to all areas. It is the task of the extension worker to discover those changes in practice for his area which have the greatest potential and concentrate his efforts accordingly. It may be in the area of insect or disease control or improved supplies of forage for livestock during periods of drought. Many years ago, the Wiscounsin, USA, Extension Service concentrated on inducing dairymen to feed a pound of grain for each three pounds of milk produced and achieved spectacular increases in production. Today much more sophisticated feeding programs bring very satisfactory results which are less spectacular as a percentage gain in production. Agricultural experts estimate that maize yields in irrigated areas of North Africa can be doubled with modern cultural and irrigation practices together with hybrid varieties responding to heavy application of fertilizer.

Extension workers, collaborating with their colleagues in agricultural research can well establish those areas of agricultural development offering greatest promise.

Coordinate the Extension Program in Agriculture with Other Programs

Extension has an obligation to provide educational assistance to other agricultural and rural services as mentioned in Chapter 3, but over and beyond the obligation, such cooperation can be of distinct advantage to the extension program.

Supervised credit agencies, cooperative associations, private and governmental agencies distributing fertilizer, insecticides, and improved seeds, purchasers and processors of agricultural products, veterinary services, irrigation districts, pest control programs and many other institutions provide essential services of an operational nature required for agricultural development. Each of these bodies may have representatives in the community promoting its product or service. However, no one of these institutions or services is concerned with the total agricultural progress of the community. Extension on the other hand is concerned with helping people use all available resources, including the above mentioned services, to improve agricultural production, increase family income and raise the level of living in the community. There is a mutuality of interest which requires coordination of efforts among all of these economic and social forces. But how best can this coordination be achieved?

First, as previously discussed, it is a responsibility of agricultural administration at the national level to establish a policy of coordination and so organize the ministry of agriculture as to encourage cooperation in the execution of rural programs. But just as agricultural programs have their impact on the farms of the masses of rural people, so does coordination of programs take effect at this point. It is here that efforts of all institutions and services are focused and results achieved. Therefore, efforts of coordination at all higher levels need to be focused on the local development program. As professional agricultural educational leader in the community, the extension agent has an obligation and an opportunity to influence coordination of all developmental agricultural activities. He is concerned with the total welfare of the people of his county or district. He is trained in social organization as well as agricultural technology and enjoys the confidence of farmers and officials alike. If he is a member of the staff of the district agricultural office, the head of that office may have official responsibility for coordination of all ministry programs in the area. In this case, the extension agent may serve as an informal leader in coordinating programs but his task is none the less important.

By involving all of the agricultural interest of the area in an extension program two purposes can be accomplished. First the resulting program can include the contribution of each of the institutions and services in accomplishing extension program objectives. Secondly, educational needs relative to credit, cooperatives, disease control, use of fertilizers and improved seeds, in which other agricultural services are concerned can be considered, in setting goals for the extension program. Nothing is more effective in bringing about coordination at the local level than the participation of leading farmers where programs for their benefit are being planned. With farmers present in a meeting, government officials are constantly reminded that development programs will succeed or fail as a result of the actions of farm people; that improvement programs are designed in their behalf. The farmer expresses his judgement of the value and effectiveness of each agency by the manner in which he cooperates or fails to cooperate in each agency program.

Chapter 5.

EXTENSION PROGRAMS IN HOME ECONOMICS [1]

Agricultural Extension is a Family Program

Farming is an occupation that involves the whole family. The farmer, his wife and his children share in the daily and seasonal round of caring for the animals, planting, cultivating, harvesting and marketing the crops. The responsibility of feeding the family and protecting the health of the children concerns both the mother and the father.

Farm activities are so interwoven with those of the home that if extension education is to be effective, it must serve the entire family. The boys and girls in the family not only help with the work on the farm and in the home, they often influence their parents to try out improved practices they have learned in their extension club projects. Boys and girls are the farmers and homemakers of tomorrow. Innovations they learn will carry into improvements for the future.

Home economics extension focuses on teaching women and girls. "If you educate a man, you educate an individual. If you educate a woman you educate a family." This old proverb is true today. Any program aimed at changing patterns of activity in a rural society needs to take into consideration the woman's influence in the home, in the village and in national affairs. A woman's primary concern is her children, feeding them, caring for them and helping them to grow into healthy and responsible adults ready to take a place in society. She needs assistance from women who are trained to teach her how to better feed her family, how to care for her children, how to improve her house, how to make clothes for her family. She needs trained help in learning how to better manage her resources to improve the family's living. When women are not educated to the homemaking role, there is no progress toward better living.

Because the rural woman's responsibilities encompass affairs of the home, the family, and the farm, the extension home economics worker who helps her must be trained to assist in these different areas of work. In addition to her training in home economics, she must know about agriculture and the improved farming practices recommended in her area. She needs to work closely with agriculturists. She can do this easiest if she is a component part of the Ministry of Agriculture. When she is a member of the agricultural staff, she completes a team for a total farm, home and family approach toward improving agriculture and rural living, each of which is dependent on the other.

The Role of the Rural Woman in Agriculture and Economic Development

The woman's role in national development is often overlooked. Improved agricultural production is basic to both economic and social development, and here the wives of farmers have great influence. A woman may not always attend a village meeting with her husband, but her influence goes with him. This influence can change a village. It is often the woman who is first willing to try improved farming methods. Her interest and attitude, plus her labor, help determine what the production will be on a farm. Back of every man is a woman who helps him carry out improvements or hinders him in making changes because she doesn't understand. In many countries the village woman has been the forgotten person, yet she may be the key to the success or failure of agricultural programs.

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A quick look at population figures shows there are 36 million village women in Africa alone. These women are important. In the past a housewife learned her homemaking skills from her mother. Each generation lived much as the preceding one. Now her job is bigger. Changing times make improved linking conditions possible and she wants them for the family. Never before have social and economic changes affecting the home and family had such impact, from the smallest rural hamlet to the large city. To prepare families to meet these changes, home economics programs are an integral part of development plans in most countries.

As families move from subsistence farming to a cash economy, they increasingly become consumers. As consumer goods become more plentiful and varied, women are faced with managing money and making choices. They thus influence the growth and expansion of industries dealing with food, clothing, housing, furnishings, household equipment, and other products used in the home. With continued education, women increasingly demand more and better consumer goods.

Health, too, is an important factor in economic development. The woman in the home is responsible for the health and well-being of her family. She determines whether or not the family lives in a clean house and practices sanitation. Whether her babies live or die depends upon the care she gives them. She plans and cooks the food to help her children grow strong. And she sees that they are taught to be honest and respect other people.

Governments are beginning to recognize that helping the family and the home helps the nation. They recognize that good homes, happy families, and educated children are basic to a great nation. They are becoming aware that village women are helping to build a firmer base for their country's progress.

The rural woman's role in agricultural and overall development becomes of even greater importance as we take a closer look at her responsibilities and influence on:

Food Production and Use

A serious food situation exists in the world today. Many countries already have more people than they can feed and populations are growing. By the year 2000 A.D. there will be twice as many people as there are now. Unless more food is grown and used more wisely, there will be even greater hunger.

The problem is not only a lack of food but a lack of knowledge about nutrition. This means food in the amount and kind needed to develop a strong healthy body and provide energy for work and play. The hunger and malnutrition problem in the world will be solved largely on the farm and in the home. The woman is responsible for selecting the kind of food the family eats and for preparing and serving the meals. She must know the healthful way to feed her family if they are to be well and strong.

Increasing food production is not enough to solve the food problem. Harvesting food crops at the right time and in the right way saves food and makes for better diets. Too often food crops such as tomatoes are picked either too green or too ripe and handled in such a way that they become bruised and rot quickly. Storage of food is another problem. Food grains such as rice or millet are often stored in the house, and although these may be the family's most prized possession, a large proportion is lost to insects and rodents. Seeing that the food grain harvested reaches the mouths of the family (instead of a fourth of it going to feed rats and weevils) is the same as increasing the total crop harvested.

Properly caring for perishable foods in the home to prevent waste also increases the family food supply. Harvesting, storage and caring for food in the home is often handled largely by women. They need to learn how to prepare, cook and serve food in a way to prevent loss of its nutritive value. Food habits are an important factor in being well fed. For example, in a corn or rice eating country, a new variety of these grains recommended by the

Ministry of Agriculture because they give higher yields may not be acceptable for food by the people. The extension home economist working with the women on cooking methods may be the key to making this essential change from eating the old variety to accepting the new. Women must learn not only improved practices in producing food but they must also learn the importance of food to health and how to feed their families for good nutrition.

Health of the Family

A strong healthy family is essential. The wife and mother in a rural home is the custodian of the health of the family. Acute illness is a big problem and often a big expense to the family. But more often family members have chronic sicknesses such as malaria, dysentery, parasites, and malnutrition they have lived with all their lives. They do not know what is the matter or that they can do something about it. All over the world people need to understand what good health is and what they can do to have better health. The family needs to understand that what they eat, how they cook and wash dishes, the kind of water they drink and whether or not they keep clean and live in a clean house and surroundings, have a great influence on their health. They need to learn what sanitation has to do with good health. Many people thought to be lazy and shiftless actually are sick and do not have enough energy to work. Their thinking is dulled because they are in poor physical condition. They do not make productive citizens.

Care of Children

Parents the world over are interested in the well-being of their children. Almost every phase of family living affects the child. Child care must be considered as an important part of a total program for improved living.

But large numbers of children die every year from causes that could be prevented by the parents if they had been taught the healthful way to care for their children. Childcare begins with the mother when she is pregnant what she eats and how she care for herself affects her chances to have a healthy strong baby. She needs to know how to feed and care for the infant, how and when to wean the child, and how to properly feed and care for the toddler after weaning.

The mortality rate in children between the ages of two years and four or five is great in many areas.When the children are no longer given breast milk,they are often fed only a diet of starchy gruel or pap with no protein and develops kwashiorkor or marasmus. Protein deficiency in pre-school children is one of the great nutrition problems with which governments around the world are now concerned.

Child care emphasizes good nutrition in relation to progress of the child in school. It includes children's needs and how to meet these needs from infancy through adolescence. Parents need to understand that to give their children better living, both the home and the community must increasingly become healthful places to rear children. If there is not proper food to eat, houses have no windows, if they are unsanitary, if they have no latrines, if water for the family is unsafe and scarce, if there are flies and mosquitoes everywhere, the children have little chance to grow healthy and strong.

Management in the Home

Management in the home is as important as management on the farm. A farmer needs to plan and organize his farm and his work. So it is with running a household. A woman must think about what jobs she has to do and how much time she can spend in the fields. She will need to think of how much money she has to spend on her home and family and how she can use the money wisely to get the most from it. She needs to know how to use her time and how to conserve her strength and energy for her most important jobs. She may feel she is very economical and does not waste money. She may not realize that taking care of what she has is one way to save money. In the whole area of planning and managing her home she needs help. The extension home economist has such information and experience with which to assist her in all areas of management and consumer buying.

The Scope of Home Economics Extension

Home economics is concerned with the wide range of activities dealing with home and family life today. Never before in history have the forces of social and economic change that affect these activities been so strong. They are at work in the smallest rural village and hamlet as well as in the large urban areas of every country around the world. To prepare families to meet these changes, governments are increasingly recognizing the need for home economics education. Home economics extension programs are becoming part of development plans in many countries. It is highly important, therefore, that the home economics extension program contribute to the country's national goals and to the goals of the ministry in which it is located. Such goals may include improvement of diets, better housing, better sanitation, increased production, etc. Ministries of agriculture, for example, generally have goals of producing within the country most of the food people eat, plus sufficient export crops to support the economy of the country. Helping a family increase its rice production, along with a good garden and a healthy flock of chickens makes a contribution. Teaching them how to eat a balanced diet may help them to have the health and energy needed to increase cash crops for export.

The home economics extension program must be realistic. It must be planned to be within the ability and resources of staff to carry out. The program must be practical, dealing with recognized problems of the home and family. It must propose solutions people can carry out. The chief focus of the home economics extension program is upon the woman who has the triple role of homemaker, consumer and producer and whose activities include:

- Caring for and training children
- Producing, preserving and preparing food for the family
- Improving the sanitary and physical environment of the home to protect the health and well-being of the family members
- Selecting, making, caring for clothing and articles of household use
- Managing all, available resources including those provided through community services
- Managing and improving the home

Factors to Consider in Building a Strong Home Economics Extension Program

Organization and Staffing

The organizational structure for home economics extension within the extension service of the Ministry of Agriculture should be similar to that for agriculture, with home economics staff at each level: national, provincial, district and local to correspond to their agricultural counterparts. In this way there can be easy communication and coordination of work at each level. The same principles would apply if home economics is located in one of the other ministries. Often because of lack of funds or lack of trained women, home economics programs are set up with less staff than other programs in the ministry. Because home economics work is less well known and understood than agricultural work, it is often assumed there is not the need for as much personnel, and too often home economics programs are set up with so little staff that progress is hindered from the beginning. Because of the nature and scope of home economics work, more staff may be needed than in some of the other ministry programs.

Whatever ministry she is in, the home economics worker can function best as a member of a team. She needs an agriculturalist at each level, with whom she works. In working with the whole family, it is important that men and women work as a team. Even in societies where men and women do not go to meetings together it is important for the home economist to have easy access to agricultural information to help keep the village women informed on the newest recommended practices in agriculture.

The home economics extension organization should parallel that of agriculture, with women counterparts at each level. However, one of the greatest problems in starting or expanding a home economics extension program is lack of trained staff. It may be better to concentrate work in a few selected provinces or areas to demonstrate what can be done with a smoothly running organization in a small area rather than scatter staff thinly over a larger area and show little accomplishment.

Staff will fall into three general categories: village level workers, subject matter specialists, and supervisors, including a national leader of home economics.

The National Leader of Home Economics Extension

It is important in setting up a home economics extension program to select a woman as national leader. She will help recruit and train other workers; work with her counterparts in the other ministry programs to interpret home economics to other national leaders, and plan the operation of the new program.

The national leader should be a qualified person with professional experience, even though such experience may not be in the field of home economics. Experience as a school principle, a community development or social worker, or a public health educator could be useful. Her experience should have been in a position of responsibility and leadership. The national leader of home economics extension should function as a member of the extension director's staff, and under his supervision and guidance.

Village-Level Workers

The success or failure of the home economics extension program rests in the hands of the field workers. In recruiting village level workers, look for capable women who have finished basic education and have gone into some other field. There will be some who have had good work experience in other fields and who will find extension's method of teaching people appealing.

The person responsible for recruiting these women should talk with people in the ministry of agriculture and other ministries as well as the professors at the university and women leaders in other fields.

Job descriptions and qualifications for each position should be written before the recruiting begins.

Some things to consider are:

1. The home economics extension worker deals with families and learns many personal matters. She must have a genuine interest in helping rural families, and hold information in confidence.

2. The village worker must be willing to live in the village. Often, selecting them from villages and returning them after training to villages near their homes has proved successful.

3. The worker must have a genuine respect for village people and be able to treat them as equals.

4. Home economics extension workers must like to be with people and to teach in an unstructured situation.

The village worker should have only enough villages to work in at first so that she can show results.

Subject Matter Specialists

Village level workers are generalists. They cannot be proficient in all subject matter areas. They need the help of subject-matter specialists, who have sound knowledge in their own particular fields. Specialists study continually and keep up-to-date on new developments. They train the village worker to teach village women and girls. They prepare leaflets, bulletins, etc., in their subject matter area. The less training the village level workers have, the more they need a specialist to back them and the more materials she will have to prepare for their use. If the specialist is training college degree agents she may only prepare bulletins and train them broadly. If she is backstopping women with a 6th grade education, she may need to prepare posters, teaching aids, write news releases and radio scripts for them and will train them for teaching specific lessons.

Well rounded subject matter specialists are essential. Without sound subject matter in areas of family living such as nutrition, child care, home management, clothing, home improvement, etc., the best teaching methods are useless. Because of the general lack of home economics knowledge in many countries, these specialists may serve as the fountains of clear, sound knowledge in a desert of misinformation. A program can stagnate without subject specialists to pour in new knowledge as well as sort and select information for use in village homes.

Specialists at the national level can often serve all parts of the country, although in some countries specialists also are placed in provincial or district offices.

Supervisors

Village workers with limited training need a supervisor to help them plan the program, organize work, and guide them in how to carry out a program to help village women and girls. Specialists sometimes help supervise village workers. Supervisors should be carefully selected and trained. They will represent the national leaders of home economics and also function as members of supervisory teams with their agricultural counterparts.

Training

Educational Background

Many countries do not offer university training in home economics. Often women who receive such training will have had to get their training out of the country. This means when recruiting staff for home economics extension there will be few trained women to draw upon. Generally there is competition with other home economics programs for staff. University degrees cannot be required for all extension staff, but those in national leadership positions profit by it and teachers in training institutions and subject matter specialists need as much home economics background as they can get. In the early years of development, degree level of training even for these may not be practical, but it should be planned and carried out as soon as it is practical.

Pre-Service and In-Service Training

Staff training needs to be a built-in feature anywhere, but in countries where staff must be employed with little or no training in home economics subject matter, it needs to be longer and be provided before the worker is placed on the job. Regardless of prior training or experience, training for the particular job is a key to success. A person cannot do a job without knowing what is expected or without specific training for that job. No worker should be placed in a village until she has had training.

Training Centers

In many countries the extension service will have its own training center for new village workers. Training in some places lasts 9 months to a year and in others is as long as 2 years. To be most effective and make best use of staff, the training center needs to be closely integrated with the work of the operating staff of extension service. Supervisors and specialists should do some of the training for experience, to keep staff training in line with the on-going program, and to make the transition from student to worker as smooth as possible.

A home economics extension training center is desirable where the workers may be in residence 9 months to 2 years. They need basic training in all areas of home economics as well as gardening, care of small animals and poultry and some knowledge of other agricultural activities the women are involved in. In addition, their course should include a parallel course in home economics extension and principles of working with people. Nearby villages can be used for field experience so that practice and training can be coordinated.

As soon as there are well qualified, experienced village workers, the new workers be placed with them after their training center experience and before being placed in their own villages. These trainer agents will also need training for this added responsibility. They should carry out the training program under close supervision of the provincial or district supervisor.

A training center provides continuous in-service training. All staff members, to keep abreast and regardless of experience, need frequent short periods of in-service training.

When a training center is not available, employment of new staff can be done at certain times in order to conduct a training course at specified intervals.

Logistics

To carry on a successful home economics program support facilities and equipment are essential. These are:

1. A satisfactory place for the village worker to live in the village, which is approved by the villagers.

2. A place to serve as an office where villagers may come to her for advice. If an office cannot be arranged and she has a demonstration room or house, a table in one corner can serve this need. As a last resort a table set up under a tree on certain days can serve as an office.

3. Acceptable means of transportation. In some countries a motor bike or bicycle is an approved vehicle for a woman to use. In others it is not. If it is not, some other mode will need to be worked out. The cost of transportation should be provided. For example, supplying her with a motor bike and a monthly stipend for fuel.

4. A good home economics extension worker gives many demonstrations and uses visuals to make her teaching more effective. She will need an allowance in order to purchase supplies for demonstrations and visual aids.

Methods Women Like

Women like to meet and learn something new in groups. The group which gathers when the village worker is teaching a lesson provides the same kind of social exchange women find pleasant at the river when they do their laundry together. They like to exchange ideas about the subject being taught and hear of successful experiences from neighbors. Generally they feel more comfortable with other women. They feel more free to speak than where men are present.

Women like demonstrations. They like to see a process carried through its various steps. They like to help give the demonstration. Often in a village demonstration the women will take over a step such as stirring or beating as soon as they see how it is done. They like to be given responsibility and feel it is a compliment to be allowed to do it.

Women like tours. They like to go to other homes and see improvements such as a rearranged kitchen or new stove. They also like to show what they have done.

Women like to have the village worker call on them. They like the personal attention she shows them by coming to their home, and often take the opportunity to discuss a problem they would not mention in a meeting.

Women like to do work with their hands. Their days are filled with activities and they think in terms of activities. A demonstration followed by all women repeating the process is usually well received. It is a good teaching method and is enjoyed by the women.

Women like organizations. Someone has said there is no force greater than women's force once it is organized. Women's extension clubs have been a great influence in improving both rural and urban life.

Rural homemakers' clubs are rapidly developing in many areas for women who want to come together to learn how to have better homes and a better living. These clubs provide a systematic way to teach women and can be very influential in getting things done. A cooperative spirit is developed through club work which teaches that "we", the women of the village are responsible citizens and that "we", working together as a group and with our husbands can provide for many of our own needs.

When a group of people form an organization, they are beginning to recognize the value of working together in an organized way to get what they want. An organized group of responsible citizens can stir a whole village to action.

Developing Leaders

It is important to think in terms of helping village women develop their potential for leadership. To do this, one must help them grow step-by-step. The first thing may be to ask a woman who looks especially interested to help in some small way with a demonstration. Maybe at the next meeting she will be willing to come early and help arrange the benches for women to sit on. For a later meeting she may be willing to remind the other women to come to the demonstration.

The most important single factor in developing leaders is the attitude of the village home economics worker. If she believes women can do leadership jobs, is willing for them to do some of the things she previously did, and will train them to do these jobs, she can have leaders. It means that the worker who has previously taught the women new skills and enjoyed their appreciation now must find her satisfaction in seeing leaders do well. The inexperienced worker or one who feels insecure because of limited training herself may be reluctant to give up the pleasure of the direct contact with the women. She is afraid often that the women will lose confidence in her. In some countries groups of women are organized and the village worker teaches each lesson herself. This limits her spread of influence to the number of groups she can handle. When the women want to meet every week or two as they do some places, the teaching is slowed to a pace that is incompatable with development needs.

In the beginning, while leaders are being located or taken through the steps necessary to get them ready to lead in teaching some of the skills, the village worker will have to teach the group each time she holds a meeting. But she should be trained to search for potential leaders and to believe that the first step in expanding her program is through the use of these leaders.

Leaders should be carefully taught how to do each job they are asked to perform. They must experience success in each leadership activity and get satisfaction from it.

Leaders must have recognition for the work they do. In each culture there will be acceptable ways of recognizing leaders. Some ways that are used in many places are:

1. Giving a simple and sincere expression of appreciation by the village worker.

2. Seeking the advice of a leader lets her know that she is respected by the professional worker.

3. Sending the leader a letter of appreciation or giving her a printed certificate seeing she served as leader in a particular project.

In extension one of the basic purposes is to develop people. Giving women opportunities to serve as leaders in the home economics extension program helps them grow in self-confidence. It is not imposing on a woman to ask her to be a leader. Rather it is giving her an opportunity.

Determining Priorities

When one begins a new program it seems that everything needs to be done immediately. This is obviously impossible in terms of resources such as staff, teaching materials and time for training staff. It is necessary to set priorities and not attempt to cover every phase of homemaking at once.

In determining priorities, officials in the ministry should be involved. Their observations of needs are important and will be helpful later in maintaining support once a course of action is determined. What are the agricultural needs? The family and health needs? This joint discussion of needs and priorities will help the agricultural staff recognize family needs and how they are interwoven with agricultural production.

The home economics staff should encourage the total staff to think of each phase of programs dealing with the family as of concern to all extension workers. For example, a nutrition program is not just a home economics program.Women in agriculture have much to contribute in improving production of food for the family and helping farmers see the need to improve the nutrition of their families.

In determining priorities, get as many facts as possible. Don't depend on hearsay or general impressions from casual visits to villages. The visits are essential to gain first hand knowledge but should be planned to collect facts in an orderly way.

In the beginning, the program should be limited in breadth in order to prepare the staff fully for the teaching job involved and in order to show results. If a program is too varied it is impossible to show specific improvement, and seeing results is important to the village people, the staff, and to officials who have supported and encouraged the program. First priority should be given to solving home economics problems recognized by many people. These will probably be in nutrition or home sanitation.

Once a large area such as nutrition is selected it will be advisable to narrow it in audience. For example, nutrition for infants and preschool children.

This does not preclude the principle of beginning where people recognize a need. It may be necessary, for instance, to first teach the women how to use sewing machines if this is what they say they want to learn, then introduce the idea of raising better gardens. While teaching use of sewing machines, there is time to discuss needs the women had not been aware of before.

When priorities have been determined, the program needs to be written down on paper with long-time and immediate objectives clearly defined. Methods to be used to reach the objective and the means to be used to evaluate progress should also be written into the plan.

To maintain interest in a home economics program it is necessary to be alert to changing needs. Often a new development in a village, or even tragedy, can give a new face to a program. Introduction of a new variety of rice into the community offers a chance to teach how to prepare it for babies and others in the family. It may provide an opening to suggest an improvement in preparation that would have been difficult if everyone had continued to use the old rice. An epidemic associated with impure water may provide the opportunity to teach women how to have clean water for their families.

It is also important to publicize results. This is important in the village as well as in the ministry and among other people of influence. Get important officials to go to villages and see results.

The Home Economics Extension Program Needs Support of Many Different People

The extension homemaking program must be understood by both top government officials who provide the funds and by every family in the program. There are many people who do not understand the scope of a program dealing with the home and family. Some think home economics involves only simple skills in cooking, sewing, laundry and house cleaning. Others think of it in terms of frills and fancy work. Influential people at the national level on down to the village level must understand and see the need for educating women and girls to become better mothers and homemakers. Support means more than just approval. When a national official takes part in a special homemaking event out in the village, he is more likely to give the program the kind of support it needs. The home economics extension program needs to be understood by religious, educational and business leaders at every level. Women in high positions in both urban and rural areas will often give support and help extension homemaking programs if they become interested and are called on for specific kinds of help.

Coordinating Home Economics Extension with other Agencies and Organizations

The problems and opportunities in rural areas are interwoven and inseparable. Programs concerned with them often overlap.

Every country has many government and private agencies and organizations concerned with rural welfare and conducting family realted programs. For example the ministry of education is concerned with educating boys and girls in home economics subjects and may have adult programs for parents. Extension rural youth club work should be closely coordinated with the school programs for boys and girls in home economics and agriculture. The ministry of health is concerned with improving health of families and communities. Farmer's associations may have programs for wives of farmers who are members.

Chapter 6.

RURAL YOUTH EXTENSION PROGRAMS [1]

Throughout the world expectations are rising and people are clamouring for better standards of living. Rural youth work has been accepted as a way to introduce new ideas into rural life and train leaders and citizens for the future. Rural youth work is educational. It aims at the total development of young people to prepare them for their role as useful citizens.

Seventy-four countries have organized rural youth programs of this type. More than 364,000 clubs have a membership of nearly eight and three-quarter million young people. For a number of years scattered efforts in rural youth work were made by businesses, church missions, schools, and individuals. The most recent expansion has been directed by government agencies, principally agricultural.

The philosophy, principles and procedures discussed here are for rural youth programs directed by a central government through the Agricultural Ministry. They often apply to non-government sponsored programs as well. An effective rural youth program must consider the needs and interests of youth, the contribution of youth to the welfare of the farm family, community, and country, and the development of skilful, intelligent, industrious, dependable, and responsible citizens.

A successful rural youth program is valuable to the youth who participate, the families involved, the community, and the country. Club members contribute to rural improvement and better living. Each project activity demonstrates improved practices to parents and neighbours. The introduction of improved seed, fertilizer, insect control, and food production and preservation through these projects, and their adoption by parents and neighbours, has helped to speed rural development.

In many countries rural youth work is an effective way to close the gap between what is known about agriculture and home economics and what farmers and housewives do. In this way rural youth club members serve as messengers of the government. They spread the information farmers need to produce the food required, and thus improve health and family living for the entire country.

Using adult volunteers in positions of leadership and on sponsoring committees helps to strengthen democratic adult leadership in the community.

Philosophy of Rural Youth Work

It is Educational

Each project teaches skills and methods recommended by agricultural and homemaking technicians. Rural youth learn these new practices by actually using them in their home and farm project activities. The skills and improved methods they use and learn become a part of their life.

The training rural youth club members receive aids their personal development. By taking responsibility for a definite farm or home enterprise, they develop dependability, responsibility, trustworthiness, and industry. They learn the dignity of labour. Participating in club meetings, serving as officers and chairmen of committees, appearing on programs, and competing in contests prepares them for action in a democratic society.

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[1] Rural Youth Clubs Around the World - Federal Extension Service, U.S. Department of Agriculture in Cooperation with the Agency for International Development U.S. Department of State.

It is a Voluntary Program

The program is open to any rural youth who meets the requirements for membership. There are no dues to be paid. There are no compulsory requirements for membership and participation. It is non-political, non-sectarian. It has no limitations as to race, creed, or colour.

It is a Joint Endeavour by Government and People

Established at the village or community level, the rural youth club is organized and directed by local leaders and parents. The system is supervised by a professional youth leader who coordinates the organization and program of clubs with similar objectives. The local club is a place where members and youth leaders can develop plans, receive technical training, and function as part of a national program.

Basic Factors in Organizing a Rural Youth Program

In most countries where rural youth work has been established, it is sponsored by the government. In a few countries rural youth work is sponsored by non-government groups. Successful youth programs are being conducted under both systems and combinations of the two.

Establishing Responsibility

When youth work is sponsored by the government, the responsibility should be placed in a specific ministry or department by legislative act, Cabinet action, or decree. Such action should provide the financial, administrative, and technical support and direction needed to assure successful promotion, organization, and supervision of the program.

The legal responsibility for the rural youth program most logically rests in the ministry or department of agriculture. Work with rural youth is carried out in a rural agricultural environment. Its principal objectives are to train youth in the everyday activities of the total farm family, agricultural and homemaking techniques, and community life, and through them to contribute to the improvement of rural life. Thus, government agricultural agencies have a major contribution to make to the program.

Rural youth work will be most effective when it is organized as an integral part of an agricultural extension-type program involving the whole family in rural improvement. Any attack on the problems of rural people can be promoted with greater impact when it is done simultaneously with the farmer, his wife, and his children. Rural youth work is a chance to get knowledge of improved methods and techniques out to the farm families who need it to get increased or more efficient production, increased incomes, and improved living standards.

The Rural Youth Club

What is a Club?

A club is an organized group of young people, usually between 9 and 20 years of age, under the guidance of extension workers and local volunteer leaders. Members elect their own officers, plan and conduct club programs, hold regular meetings usually once a month, and carry on worthwhile activities in farming, homemaking, community improvement, and other related areas.

Why a Club?

The club brings members together with the trained local leader for technical training and instruction. Through a club the leader can contact more youth. Club meetings, programs, and activities afford a definite opportunity to train and develop leaders in group action and democracy.

Who can Belong?

Requirements differ from country to country. To become a member of a rural youth club, an interested boy or girl agrees to comply with whatever requirements have been set up. The following have been used in a number of countries:

- Obtain parents' permission to belong to the club.
- Agree to complete the requirements in one or more farm or home project activities.
- Keep a record of the work done on forms supplied for that purpose.
- Attend and take part in club meetings.
- Exhibit something produced, made, or managed in connection with the project;
- Demonstrate some new method learned during the club year.
- Learn to judge these products and exhibits for quality and workmanship.
- Be 9 to 20 years of age, (or any appropriate ages).
- Help other members whenever possible or needed.
- Take part in all club activities and programs for the benefit of the village.

Organization for Administration and Supervision

National Leadership

The success of any worthwhile movement depends to a large extent on a trained, dedicated, and enthusiastic leader. Work with rural youth, likewise, must have a leader of vision, dedication, and enthusiasm. The designated leader of the rural youth program should have a rural background. Where possible, he should be from the village and want to serve rural people, and rural youth in particular. He should know the problems of people in rural areas and the needs and wants of rural youth. He needs actual experience in organizing and conducting a club before trying to teach others. He should not feel superior to the people he hopes to help, but be willing to work with his own hands to show them how to perform farm and home tasks in an improved and modern way.

A national leader would benefit from a chance to study and observe youth programs in some other country if this is possible.

A national youth leader must:

1. Outline the purpose, procedure, program, and organization of rural youth clubs.
2. Prepare a plan for promoting the rural youth program.

3. Select, train, assign, and supervise personnel at state or provisional levels.

4. Cooperate with youth leaders at the state or provincial level in:

   - Introducing the idea of youth work to village leaders and parents.

   - Organizing village youth councils to sponsor club activities alone or with existing community organizations.

   - Recruiting members and helping them choose projects.

   - Organizing village youth clubs and selecting and training village adult leaders.

5. Coordinate rural youth program with adult work and cooperate with staff in charge of adult work.

6. Administer the program.

7. Maintain records and reports, prepare budgets.

8. Measure progress through periodic evaluation.

State or Provincial Leadership

To achieve the full impact of a rural youth program in a country, the supervision must be as close to the actual operations as possible. While it is not necessary to have personnel in every state or province at the beginning, efficient leadership should be located and trained in each area as the program progresses. One leader is needed in each state or province. He will:

- Work with and under the national youth leader to help and supervise county or municipal youth leaders.

- Help train country or municipal personnel to organize and operate the rural youth program.

- Help plan and carry out special activities of interest to rural youth, such as exhibits, contests, tours, camps, and sponsorship for awards and recognition.

- Obtain records and reports on progress and development of the rural youth program in his region.

County or Municipal Leadership

Locating qualified and trained professional leadership at this level is most essential in organizing and promoting the rural youth program. These leaders should have many of the qualifications of the national rural youth leader. These workers actually contact parents, prospective members, and village leaders. Therefore, they must be trained not only in agricultural and homemaking development and improvement, but also in how to work with people to gain their interest and cooperation.

Leadership at this level must:

- Keep informed on the aims, objectives, program, and methods of organizing and promoting the youth program.
- Know the economic conditions in each village and the needs and interests of youth in the area.
- Tell leaders and parents about the rural youth program.
- Help local village leaders organize a village youth council or committee to sponsor the program alone or with existing organizations.
- Help leaders and officers plan programs for club meetings.
- Help determine community service projects for the members to uundertake.
- Teach members how to conduct meetings, select and judge exhibits, and put on demonstrations.
- Teach members proper methods and practices for their projects.
- Select local volunteer leaders and teach them to help their members carry out project requirements.

Community or Village Leadership

The most important link in the rural youth program is the local volunteer leader in each community or village. These leaders may be parents, school teachers, or religious leaders who live in the village and are in regular contact with the youth. In most countries they serve on a voluntary basis without pay. They direct the youth in their programs and activities and see that members carry out the instructions of the professional youth leader.

Development of a National Youth Program

Developing a national program that will effectively reach the rural youth of a country requires a great deal of imagination and planning. A plan that is effective in one country may not work well in another. Each country must plan its program to fit its own situation, culture, and needs.

The first job in launching a rural youth program is to determine what needs to be done, where to begin, the money and people needed, how to divide responsibility, and a timetable. The new program must begin on a small scale and expand with the increase in trained personnel and funds available. However, the initial planning should envisage a program of national scope. Goals must be set far enough in the future to allow for sound growth and development.

Study and Planning Phase

The importance of taking time to find out what rural people want most cannot be over emphasized. What people want may be entirely different from what national leaders think they need. The felt needs of rural people can be the most important considerations and best starting points in determining the direction and content of a rural youth program. When programs are based on needs the people become appreciative, cooperative, and enthusiastic about working with other villagers for improvement.

Study the socio-economic situation and standard of living of farming communities in different sections of the country. This will require visits to the various communities to get a clear picture of the situation.

Try to determine the basic attitudes of farmers throughout the country. Note the differences in the progress being made in different areas, and observe farmers' attitudes about changes in farming.

Observe climatic and soil conditions in order to plan future farm youth club projects. All projects must be based upon members' needs and the projects' adaptability to area conditions.

Study ways to integrate the farm youth program into extension work with adults. Contact the various branches of the Ministries of Agriculture and Education to inform them of your plans and enlist support for the program.

Seek out field extension staff who have worked with farm youth. Learn from their experiences. Study any former attempts to organize rural youth programs.

Note the food habits of different sections of the country and observe dietary problems. Decide how youth clubs might help correct them.

Study the needs of youth, farmers, and housewives.

Review Principles

The broad principles of rural youth work are the same in all countries. However, the specific programs, projects, organizational procedures, and supporting bulletins will differ since they must all be adapted to local conditions. Start the rural youth program where the people are. It should be related to their needs and interests and adapted to their situation and culture.

Most youth club activities should take place on or near the member's home and farm. Parents should be encouraged to attend and help with the activities.

The clubs must belong to the people. The members must regard the clubs as theirs and not as the property of the government or the sponsoring agency. Members should run their own clubs. The clubs should become a part of the community and something of which the community can be proud.

Volunteer leaders are essential to a successful rural youth program. These leaders expand the work and help make it a people's program.

Each member should undertake a specific task with his own hands. He should have an interest in, a responsibility for, and perhaps ownership of a farm or home project. The project depends upon local conditions but the most common are growing vegetables, raising poultry, making a garment, and preparing food. Many others may be developed as needs and interests arise.

Projects, the heart of the rural youth program, lend themselves to "learning by doing". They teach members improved farm and home practices and often influence parents and others in the community to adopt new methods. Suggested project requirements are listed on page 90.

Developing Phase

In this phase the objectives of the program are formulated. Administrative policies and procedures are established. A plan for organizing pilot clubs is developed. The above tasks are more effectively accomplished when those who have an interest in developing a rural youth program are asked for advice. These advisors may be organized into a guiding committee and may be both government and non-government people. Such an advisory committee means more and acquires more status when members are appointed by a high government official such as the Minister of Agriculture.

Printed material must be prepared to support the program. Such material includes project requirements and standards, leaflets on projects and records, leader guides, promotional, organizational, and subject matter leaflets as well as any other simple printed material that might help develop a sound program.

Promotional leaflets explain the purposes of the youth movement in simple terms. Organizational leaflets tell field staff and volunteer leaders how to organize a youth club, help plan a program, make project visits, conduct a meeting, and give other essential information. Subject matter leaflets are written to help the member with his project.

Staff training is an important task in this phase. Where the program is sponsored by an existing extension service field staff that is available to organize rural youth work, training is more easily accomplished. If the youth program is sponsored by an organization which has no staff, the national leader must train local leaders directly. He must also develop interest in rural youth work among the people in pilot villages and ask their help in finding leaders.

Training in either case should include an understanding of objectives, policies, staff relationships, responsibilities of staff and lay personnel, methods of arousing interest in youth work, enlisting support of community leaders, soliciting parental support, and securing leadership. A sample training programme is outlined on page 93.

Organize Pilot Clubs

The number of clubs first organized is not as important as the distribution. If possible, every region should have at least one club. Two or three would be preferable since failure of one club can mean the club idea fails. Close attention needs to be given to these pilot clubs since they are the field test of all the policies, principles, and procedures developed thus far. It is said that "nothing succeeds like success". A successful pilot club in a community will lead to an expanded program. If pilot clubs fail it is usually years before any further attempt can be made to organize others.

This developing phase of the program should last 12 to 18 months depending on local situations. This allows enough time to thoroughly test all policies, principles, and procedures of the new movement.

Committee Reviews Progress

The advisory committee now needs to review progress of the developing phase and plan future development of the program. A continuing review is necessary to thoroughly adapt rural youth principles to local conditions.

Plan to Train Local Leaders

Considerable effort has already been spent to recruit local leaders for the clubs. It is important to train these leaders to do their job properly. Their constant support is essential to the long-term success of a farm youth program. A leader training program is described on page 96.

Solicit Support from the Nation's Leaders

Establish the role of rural youth programs in national policy. Publicity can point out the accomplishments and value of rural youth programs. The Minister of Agriculture should take the lead and call the merits of the program to the attention of government leaders. National leaders quickly recognize the need for a program that helps youth to appreciate agriculture. A simple reporting system integrated with the extension service's annual report will help.

Expanding the Program

Training additional staff is a prerequisite to expansion. The goal is to reach many thousands of rural youth instead of the few hundred reached in the developing program. This can be done if the principles of extension rural youth programs have been followed and adapted to local conditions. The program has been field tested and its role has been established in government. Before the benefits of a rural youth program become a reality to the developing nation, much hard work remains to be done. The above steps are the major ones needed to develop a national rural youth program.

As rural youth clubs become active throughout the country the benefits will be felt in many ways. Their impact will be felt first when the clubs are organized, and with increasing intensity later as the members develop into mature citizens. The farm boys and girls will put their boundless energies to practical tasks which create wealth. They will provide the leadership to help their people progress. People become proud of the achievements of their local rural youth club.

The unpaid volunteer leaders become better and more productive as a result of their work with farm youth clubs. They also improve their ability to lead and assume an increasingly important role in their communities.

Projects serve as an example for the club members' parents and neighbours. Conservative farmers and housewives feel that the improved methods will work as well for them as they did for the youth and many adopt new and more productive methods.

Field agricultural workers find that they gain much goodwill and confidence from rural folks through their work with farm youth. They find their day-to-day work with farmers, housewives, and parents easier because they have taken an interest in and helped their children.

Develop Meaningful Names and Symbols

Great organizations and movements have and always have had their battle cry, colours, pledge, and march song. Such characteristics identify organizations, challenge people to greater effort, and arouse their loyalties. Examples of the emblem, pledge and motto used in the United States are described on page 96.

Rural youth clubs are usually known by the same name throughout an entire country. When a club is organized, it usually adopts the name of the youth program in that country. The names vary from country to country. Most countries have adopted a name which refers to the fourfold development of youth-Health, Head, Heart, and Hands. This is expressed as 4-D, 4-S, 4-T, 4-F, 4-C, etc., depending on the words meaning these four things.

Organizing the Club

Introduce Idea to Village Leaders

One way to organize a rural youth club in a village is to present the idea to the village chief and as many other leaders and parents as possible. Another effective way to start a club is to demonstrate a simple skill or improved practice to the children and their parents. When they are interested, ask the parents if they would like their children to learn more. If the program is supported by the central government, the village chief may already have been told about it. In this case, he may gather other leaders and parents together so the professional youth leader can tell them:

- the objectives of the club,
- the benefits to the youth,
- the benefits to the families and village,
- the responsibilities of the members, parents, local leaders, and professional youth leaders,
- how to select and organize a sponsoring committee of 3 to 5 members to promote the program,

Meet with Sponsoring Committee

Survey the social and economic conditions and needs of the youth and the village.

Select projects which fit the needs of the families and are best suited to the abilities of the youth.

Develop a plan for starting the projects and following them through to success.

Meet with eligible youth and their parents to discuss the proposed program.

Consider prospective adult club leaders.

Recruit Members

At this point, village leaders understand the rural youth program and know they are responsible for local leadership. Parents have been contacted. The idea has been established. Now bring the youth into the process.

- Present the purpose and program of the youth club. Explain what the club is, its value and benefits, who can join, and the requirements for membership. Explain that members will work on projects, select exhibits, keep records, and take part in activities.
- Explain what projects are and give members an opportunity to discuss suitable projects with their parents. Help them select one suited to their needs and ability.
- Help youth fill out applications for membership. Be sure they choose a project and have the approval of their parents.

Election of Officers

Explain what officers are needed and what they do.

President:

- Works with the leader to arrange for club meetings and plan and promote the club program.
- Presides over all club meetings.
- Appoints committees when necessary.
- Follows parliamentary rules and order.
- Keeps up the interest of members.

- Helps to plan and arrange for programs.
- Works with local leader in planning and promoting the club program.

Vice-President:

- Learns the duties of the president.
- Presides in absence of president.
- Helps to plan recreation activities.
- Serves on program committee.
- Helps club members with records.

Secretary-Treasurer:

- Keeps records of attendance and minutes of all meetings.
- Reads minutes of previous meeting.
- Distributes any literature available.
- Keeps records of any money raised by the club.

Explain how officers are elected, how to nominate, and how to vote.

Supervise the election of officers

Divide the members of the club into groups according to the projects they have selected. Have each group elect a project captain and an adult project leader. These groups will hold special meetings to discuss their particular project work, but will also be a part of the village youth club.

The entire club may elect a local adult leader who will meet with the club and help them in all their activities. Sponsoring committees can be very helpful in finding adult local leaders.

How to Conduct a Meeting

A club meeting is held so members can learn how to improve project work, exchange ideas and experiences, learn to preside over meetings, take part in programs, learn new methods, and develop team work and cooperation. Normally a meeting proceeds as follows:

- The president calls the meeting to order.
- All members stand and repeat the club pledge.
- The secretary calls the roll.
- The secretary reads the minutes of the previous meeting.
- Unfinished business. The president asks for reports of committees on programs, meetings, or special activities, and opens meeting to discussion of business continued from the previous meeting.
- New business. At this point members may report on their projects or discuss anything they wish to bring up.

- President introduces the special program-speakers, demonstration, or other program feature.
- Recreation period-games, singing, and stunts.
- The president, leader, or members make any announcements.
- President adjourns the meeting.

Planning a Program for the Club

Soon after the club is organized or early in each year, club officers, leaders, and the professional youth leader should prepare a plan covering meetings and activities for a year. Such planning ahead helps members prepare for their part on programs and for special activities such as exhibits, contests, and tours. It also enables leaders to plan and prepare in advance, and tells parents about events and dates so they can help members prepare.

The plan lists what the club hopes to achieve, events and activities,and the time, place, and program for all meetings. A minimum plan would include:

- Time and place of regular meetings. Meetings may be needed often until officers know their responsibilities and members understand how to conduct their projects. After that, one meeting each month may be enough.
- A program for each regular meeting. Show who takes part.
- Special activities for the year:
  - A club fair with exhibits of products made or grown by each member - with awards list.
  - A judging contest.
  - A demonstration contest with each member demonstrating some practice learned.

Projects

A project is the farm or home activity a member chooses to do. He follows the recommendations of his local leader who works under the guidance of a professional youth leader.

The entire club program is built around the project. It is the very heart and core of the rural youth movement. It cannot be overemphasized.

Projects may be organized around almost any farm or home task or activity. They can include the feeding, care, and management of a pig, milk goat, lamb, dairy calf, poultry, or rabbits; cultivating a plot of vegetables, potatoes, corn, wheat, or other crop; improving one room in the home; preparing and serving meals; making clothing; making any useful article or handicraft; or improving health by removing health hazards.

The Purpose of the Project

- To help members learn new and better ways of farming and homemaking.
- To show parents and neighbours the value of these practices.

- To teach youths to be dependable and responsible.
- To give youth an incentive to work and the feeling they are useful members of their family and community.
- To give members the pride and satisfaction of ownership.
- To give youth the satisfaction of accomplishment.
- To give members a wholesome, useful and profitable use for their time.
- To give members a way to participate in the youth club and enjoy the benefits of group programs and activities.

Selection of Projects

Although many activities may be projects, determine the major needs and interests of several villages and limit the number of projects. Use those which teach definite improved practices.

Select projects for each village after the youth leader has thoroughly studied and discussed needs with local leaders, parents, and interested youth. The selection of projects:

- should be based on the need for improvement in the village;
- should be based on the youth's interest and ability to do the job;
- should help improve family health, sanitation, food supply and housing;
- should be practical in terms of cost and time needed;
- should challenge the best efforts of the members.

Elements of a Successful Project

Whenever possible, a boy or girl should own or have full responsibility for the animal, the poultry, the garden, or the article made or produced.

The member should do all work on the project.

Members and parents must understand how the production, increase, articles made, or income from the project will be handled.

Any income from the project should go, in part at least, to the member. This will give him satisfaction from his work. In some cases, it may be shared between parent and member. It should be a fair business agreement, whether the member owns the project or only has full responsibility for it.

If a financial return is not possible, the member should be recognized for work well done in any appropriate manner within the limits of the parents.

Keeping the member interested in his project should be the first consideration when project arrangements are discussed.

Successful projects are the result of cooperation among the professional youth leader, local leaders, parents, and members. Which projects will be available in each village should be determined by local leaders, parents, and the professional youth leader. The latter knows what help he can give. The member, the parents, and the local leader should all be involved in selecting and planning how to carry out a project.

The source of supply for materials needed for each project must be planned. Know who will supply the seed, fertilizer, insecticide, cloth, animal, or poultry required for each project.

The professional youth leader should clearly explain the requirements for members so local leaders, parents, and members understand.

Project Requirements

These requirements are taken from the facts which have been gathered by the ministry of agriculture through research, and by trial and adaptation of results from other countries. They convey the message of improved farming and homemaking which the government has to offer farmers and village people for increasing production, increasing income, and improving rural living conditions. The project is the place for government agricultural representatives, the member, and his family to meet and exchange useful and helpful information.

Every project selected for promotion in a village, or throughout the country, should have an outline of the recommended practices which, if followed and carried out, will result in improved production and quality of product.

Financing Projects

Projects must be geared to local economies. In some areas conditions do not permit even the most meager outlay of funds for a new project. Yet the seed or animals must be improved to improve production. Following are possible ways of financing or initiating projects in a village, area, or country.

First, begin with what people have. That means select projects that fit their needs, and use the seed, poultry, or animals available. This still gives a chance to teach principles of management, responsibility, and dependability.

A local farmer may be able to supply members with project materials. A leader in poultry production can give members a start and be paid back from the increase.

Local agricultural schools and missions may be a source of seed, animals, or poultry. They may be willing to start a chain program. In this case members do not pay for their start in a project, but pay back seed, poultry, or animals out of the first crop, hatch, or increase. This is used to start a new member's project.

The ministry of agriculture's bureaux of agronomy, plant production, animal science, and others often have supplies of seeds, eggs, poultry, and livestock. These are distributed by organizations such as the extension service to farmers and rural youth club members who will either pay the loan back from the increase of pass part of the increase on to another member or farmer.

Credit or Cooperative Organizations and Agencies

Many countries have different types of cooperatives, including credit cooperatives which supply loans for agricultural improvement. Among these are agricultural credit banks, commodity cooperatives, credit cooperatives, production credit associations, and others.

While these organizations exist primarily to make loans to farmers, many of them have developed plans for financing youth club projects. Such loans are made for their educational value as well as to initiate new enterprises. Youth club members keep records on expenses and income from their projects. Loans are considered as a part of their training program, linking credit to production and record keeping.

The following projects have been supported in the initial stages by cooperatives:

Poultry - With their parents' approval, one cooperative loaned youth club members enough money to buy 100 baby chicks of an improved breed. Their applications were accompanied by agreements emphasizing the work to be done to prepare for the chicks, such as making a brooder and arranging for feed, and a plan to repay the loan by culling cockerels or producing pullets.

Beef Calf - Another member, with his parents' approval, got a loan to buy a beef calf by agreeing to provide pasture and feed and to sell the animal six months later at a youth club show or auction sale. He planned to pay his note from the proceeds of that sale.

Dairy Calf - Another parent signed a member's application for a loan to buy a dairy heifer. The member agreed to produce feed, pasture, and a cash crop. He planned to use the money earned from the cash crop, selling the first offspring, and selling milk after the heifer entered production to pay off the note.

Project Records

Keeping records is important in the all-around development of the club member. Because of this, records are required for project completion. Project records:

- Develop members' understanding.
- Provide information for later reference.
- Stimulate members to improve themselves.
- Show others what has been done.
- Qualify for awards.

Explaining the values of record-keeping to new members is important. It should be done early in the club meetings. This will avoid many incomplete projects. Records are a very good way to persuade adults to follow good practices. Results achieved at home are hard to ignore. Records are valuable also for publicizing area and national results of youth work.

The essentials of a good individual project record include: (a) simple inventory; (b) list of costs and income; (c) profit and loss; (d) success and problems encountered; and (e) a brief narrative of project growth and development.

A member completes his project when he fulfills the requirements and turns in his story and record book, filled out to the best of his ability. The leader's signature on the record book means that the club member has completed his work to his and the leader's satisfaction.

Record-keeping is easier for some than for others. Encourage members to take pride in their records. This may be done by calling the record a junior business or partnership deal with parents. Point out the similarity to a businessman's books and records. Neatness is important, but not essential. Younger members should use a pencil rather than a pen.

Have simple record books for beginners and more advanced records for older members, especially in livestock projects. Keep records functional. Do not permit the record to become an end product. It is only a way to develop well trained youth. As they learn, they will keep a more complete record and take pride in it.

When it is necessary to close records before crops are harvested or animals are sold, help the club member estimate his yields by weighing or measuring fair samples. Help him calculate his total yield. This will give him the experience he needs and qualify his reports.

Special Activities

Many special activities can be used in the youth program to attract and hold members' interest. Young people love action, competition, achievement, and recognition. Some activities may be classed as teaching techniques and some as recreation, but all can be competitively geared to the developmental needs of youth. The following activities are educational, competitive and recreational. They develop talent, personality, and leadership.

Method Demonstration

A method demonstration is a way to show how to do something and explain what is done and why. A method demonstration may be given by an individual or by two people alternately presenting the materials and explaining what to do.

A youth leader may use method demonstrations to teach at meetings. Members may also give method demonstrations. A contest can be held when several members give demonstrations and are scored on their presentation.

How to outline a demonstration:

Steps	What to do	Equipment, or material needed	What to say
I			
II			
III			

How to score method demonstrations:

	Score
The Demonstrator	25%
Appearance, voice, posture, manner	
Presentation	50%
Introduction	

Equipment

Charts or models

Expression

Orderly steps in presentation

Summary

Subject matters 25%

Source of material, valid and correct

Knowledge of subject as shown by answers to questions

Judging Exhibits or Products

Judging is comparing products or exhibits with an ideal standard. It is used to teach knowledge of quality products, market standards, or breed and variety types.

Steps in conducting a judging contest:

- Arrange 4 samples of something where they may easily be seen and compared.
- Place a letter, A – B –C – D, by each sample or identify it some other way.
- Give each member a card with the same letters on it.
- Have members study each sample or exhibit and compare it with their knowledge of the ideal product.
- Have members mark their placing by writing "1" on their cards by the letter they think is first, "2" by the letter representing the sample placed second, etc.
- Grade the cards against the proper placing.
- The official judging is done by a person familiar with the ideal or standard of the item being judged. He then gives the official placings and the reasons for them.

Exhibits

An exhibit is a representative sample of something a member has made, grown, produced, or managed as a youth club project displayed so others can see what he has done. Every member should be encouraged to present an exhibit.

Members should exhibit because:

- It is a learning experience.
- It helps to raise the standard of type and quality of products.
- It shows the public what they are doing.
- It lets them compare their work with others.
- It recognizes their accomplishments.
- It advertises products that are available.

The requirements for exhibits in each commodity or type of product should be clearly understood.

When several members' exhibits are being compared, the official judging of exhibits is done by someone who is familiar with the item being judged. Exhibits are judged against an ideal or standard described on a score card.

In judging the exhibit the best item, product, or animal may be given first prize, the next best second prize, and so on to five or more placings. Another method is to group the items, products or animals as excellent, good, and fair or commendable with every member receiving recognition.

A collection of individual exhibits may be arranged to form an attractive community or village club exhibit to publicize the work and achievement of the youth club members.

Tours

Taking club members to see the work of other members in a community helps stimulate the interest of both the member visited and the visitors. A member's work to ready his project for guests to observe is good for both the member and his parents.

Members may observe the projects of other members in their own club, or one club may observe the work of a club in a neighbouring village.

Recreation

"All work and no play makes Jack a dull boy" is an old saying. Youth club work, however, tries to develop joy in doing any task well, the spirit of a group trying "to make the best better."

Organized play has a part in every gathering of youth. Therefore, every club meeting should include at least one game led by a member or leader who has prepared for it in advance.

Local Adult Leaders

Importance of Leadership

The success of any youth program depends to a great degree upon its leadership at all levels.

The local leader is an extremely important member of the rural youth organization. It is only through local leadership that a rural youth program may be made available to large numbers of boys and girls.

Who is a Local Leader?

A local leader is a person from the community who is selected to guide, teach, and advise the local rural youth club. The leader may be a parent, a teacher, or any other adult in the community who likes to work with boys and girls.

Qualifications of leaders

Too often the technical competence of a person is regarded as his most important qualification as a leader. Far more important is the person's attitude toward young people.

- Does he like boys and girls? Is he patient, tolerant, and sympathetic toward their shortcomings?

- Does he enjoy helping boys and girls, does he give praise when deserved, can he criticize constructively, does he give encouragement?

- Does he set a good example, is he accepted and respected in the village?

- Does he have the confidence of parents, the community, and club members?

A leader with the above qualifications will learn the technical things he needs to lead his club and will always be a few steps ahead of his club members. Even if he doesn't know all the answers about their projects, the members will not care because of their fondness for him and respect for his leadership.

How is the Local Leader Selected?

The professional leader can invite or select a leader after consulting members of the community. This method is often used when a club is first organized.

A local sponsoring committee or official can invite someone to be the leader after consulting the community. For example, parents in the community may have been consulted first.

Club members can invite someone to be their leader. This method is perhaps most successful after the club has been organized and developed for a time.

What Does the Local Leader Do?

The 1957 Latin American Rural Youth Leaders' Workshop outlined some responsibilities of the local leader. A leader should:

- Visit members' homes to get acquainted with them and their families.

- Help with the meetings and any other activities the club may organize. When not able to help, he must designate a substitute.

- Advise and instruct the members in the selection and proper development of their projects.

- Explain to parents what members must do and the purposes of the youth club.

- Distribute responsibility for club activities among the various members of the club.

- Work for good relations between the club and other community groups and institutions, such as the church, the schools, the parents, and organized groups.

- Recruit new members.

- Stimulate club participation in community activities.

- Cooperate with special national programs or campaigns.

A project leader can help his members succeed by:

- Visiting members' homes and projects to encourage them and their parents.

- Attending members' regular meetings.

- Giving subject matter instruction and guidance.

- Holding a tour to observe the work of each member.
- Encouraging pride by placing signs identifying members' projects.

Training Local Leaders

Visits of the professional leader to the new leader provide a very direct kind of training. They are especially useful when a new leader is beginning his work. However, such visits are limited by the time the professional leader has for such visits. They offer the advantage of discussing a problem that is important at that time.

If a new local leader visits clubs that are already functioning with a local leader, he can learn of procedures already tried - both the successful and the unsuccessful. This method also provides the inspiration of talking with another leader.

Local leaders can also be trained through bulletins, letters, radio announcements, etc. directed toward them.

A leader training meeting is a very effective method when a number of leaders can be brought together for training on a particular subject or method. The details of a leader training meeting held in Thailand are on page 97.

Talks, lectures, and other teaching methods used in a general meeting to inform people on such subjects as gardening or nutrition could be useful to rural youth club leaders in their work with certain club projects. When such general meetings are held, the rural youth leader should be invited to attend.

Tours, exhibits, and displays can be used in an informal way. Posters or displays may be sent from club to club to emphasize some principles for the leaders to teach. A display and an explanation can be set up in the office of a professional leader.

Tours can provide a more direct type of training. On a tour of garden projects, the professional leader may give subject matter information, recognize work well done, and inspire the club members to better work. On a later garden tour the professional leader may not be present, but the local leader will know what to do.

When slides or films on a special subject such as home improvement are announced in a community, the local rural youth club leader should be invited to attend.

Some General Suggestions for Leader Training

Any method of leader training must meet the needs of the leaders. The training officer or professional leader must understand the needs and problems of the leaders being trained. In other words he must be able to put himself "into the shoes" of the leaders.

It is better to do a few things well than to try to teach everything in one meeting or demonstration.

Any training must give the leaders additional information, skill, and confidence in themselves as they go back to teach and guide their clubs.

Good leader training adds to the satisfaction a leader received from his association with the rural youth program. It helps him continue to be a real key to the success of the youth.

Parents as Leaders

Parents are vitally important to the success of youth work. They:

- Help their children because they love them.
- Like to feel that they have an important role in the success of their children.
- Appreciate approval and recognition for their part in promoting youth work.
- Like to attend youth activities. Invite them.
- Generally become enthusiastic for rural youth work when they know its program and accomplishments.
- Cooperate when they understand the program. They need to know how they can cooperate. Ask them.

Training Professional Youth Workers

No team can perform any better than its members. They need instruction and practice. People who work with rural youth programs must have certain personal qualities, plus specific training and knowledge in dealing with youth and working with the technical problems facing farm families.

New rural youth personnel should like to work with young people, understand the needs and interests of youth, having a pleasing personality, be able to gain parents' confidence, and have graduated from at least a secondary school.

Personnel recruited for rural youth work should have the best possible training in agriculture, home economics, and the characteristics of rural youth. They should also have training in the field of humanities or rural sociology where possible.

Before going on a job,a new worker should be given from one to two months' intensive training in the principles, philosophy, programs, organization, methods, and procedure of the rural youth program. He should also serve as an apprentice to an experienced field worker for one to three months.

After assignment to a special area, this worker should receive frequent and close supervision from an experienced and sympathetic supervisor who will listen to his problems with patience and understanding and help him solve them. He should participate in monthly conferences with co-workers in similar positions to exchange experiences and plan further program improvements.

Evaluating a Rural Youth Program

Everything a person does he immediately questions. He asks himself, "How well did I do? How can I improve if I do this again?" Others appraise us too. This knowledge drives us to constant improvement. This is evaluation.

People responsible for directing a youth program need information to gauge progress or determine changes and emphasis. Records and reports supply some information, but there are other checks. See what is accomplished. Listen to what people say. Visit clubs and projects, with leaders and parents. See what new products are on the market. Make a survey.

Try the plan below for evaluation. Decide:

1. What you want to evaluate (what part of your program, activity, methods, etc.)
2. What you want to find out.
3. What the objective is. What have you done to reach the objective?
4. What evidence of its success or failure you will look for.
5. From whom you will get this evidence.
6. How you will get this evidence.
7. How you will analyze and use the information after you get it.

Summary of Guiding Principles

A tried and tested organizational plan for rural youth work in one country can seldom be effectively applied in another country. However, studying organizations in several countries often reveals ideas which can be adapted to meet existing situations.

A rural youth program begins in the mind of a leader who can see its influence upon and benefit to the rural youth of his country or community. It must have the approval of leading government officials if it is to continue and possibly expand.

Since rural youth work centers around activities on the farm and in the home and rural village, the greatest technical assistance should come from the ministry of agriculture. Therefore, greatest benefit is usually obtained when the responsibility for directing the program is placed in the ministry of agriculture.

A rural youth program should be based upon the recognized needs of youth and their families. It will be more successful if the youth have a voice in planning their programs and activities.

Youth around the world want:

- To play.
- To learn how to make a living.
- To feel important.
- To work and achieve.

A well organized rural youth program that recognizes these desires can do much toward developing the individual. Projects and activities should:

- Fit the family's economic status.
- Fit the needs and ability of youth - simple for beginners, more advanced for older youth.
- Lend themselves to learn-try-do experiences.
- Stimulate the interest of and develop a sense of responsibility in young people.

Concentrate on organizing and following through on a few clubs to insure achievement and success. Successful clubs can be used as examples to spread the program to neighboring villages.

The success of rural youth work in a village will depend to a very great extent upon adult interest and support. Establishing village interest and support, and training local leaders is usually the biggest and most important task in developing a rural youth program. The leaders of a village need to understand the educational and developmental features of the program. Once these village leaders realize the program's value to their youth, they are ready to take some responsibility for the work.

The wise professional leader uses these key village leaders. If he keeps them informed and stimulates their interest, they will do many things. These include recruiting youth leaders and organizing and sponsoring local youth club fairs, exhibits, village achievement programs, visits to club members, demonstration contests, field days, picnics, recreational activities, athletic events, and other activities closely associated with the local culture.

The successful promotion of a rural youth program depends upon the extent to which leadership is selected, trained, and financially supported. Most youth club failures are because professional personnel do not perform efficiently or local leaders have not been properly shown their duties. Youth clubs are most effective where the responsibility for maintaining the club rests with local leadership, but the responsibility and opportunity for technical training and instruction is accepted by the professional youth leader.

Project Standards

The following are merely guides in establishing project requirements. They must be adapted to fit the culture and conditions of the country using them. Project requirements should offer a challenge, yet be within the member's ability to understand and achieve. They should be simple for younger members and more advanced for experienced members.

Field Crops (corn, wheat, rice) project members should:

- Prepare land for planting, cultivate, control weeds and insects, fertilize, irrigate (where necessary), and harvest according to instructions.
- Use seed variety recommended.
- Prepare and display and exhibit at club show.
- Demonstrate to others some new method learned.
- Keep record of work done and time spent on project.

Poultry Project members should:

- Begin with 15 eggs, 15 baby chicks, or 10 laying hens and one cockerel of an improved breed.
- Construct a poultry house out of local materials according to instructions of local leader and professional youth worker.
- Feed and care for poultry according to instructions.
- Prevent and control parasites and diseases according to instructions.
- Select and exhibit two hens for the club exhibit.
- Demonstrate to other some activity learned.
- Keep a record of work done and time spent on project.

Vegetable Production project members should:

- Have access to at least 100 square meters of land.
- Plant recommended seed if it is available or whatever is supplied by a government agent.
- Arrange planting plan to have fresh vegetables throughout the year.
- Cultivate, fertilize, control weeds and insects, irrigate, and harvest according to instructions.
- Demonstrate to others some activity learned.
- Select vegetables for an exhibit at a youth club show.
- Keep a record of work and time spent on project.

The following four projects are among those carried out by 4-D Club members in Iran.

Food Preparation and Nutrition

Goals

- To know what we should eat each day for good health.
- To have the ability to select and care for food for the family.
- To know how to prepare and serve food in a healthful and attractive way.
- To develop good food habits.

Requirements

- Know all foods raised in your village.
- Know the foods to eat each day for good health.
- Prepare and serve two foods from each of the following groups:
  - meat, fish, chicken, or eggs
  - fruits - cooked, raw, or juice
  - milk - fluid, dried, or powdered
  - cereal - rice, wheat, or millet

Clothing (or sewing)

Goals

- To be able to make a useful, attractive, and inexpensive garment.
- To know good quality of cloth and how to buy cloth for a garment.
- To know how to care for clothing.

Requirements

- Make one garment for yourself. Make other articles for yourself and your family as time and money are available.
- Repair at least four garments for yourself or your family.
- Do the family washing two times.
- Demonstrate or exhibit your project at a local club meeting or competition.
- Keep a record of the cost of the garment or garments you make and the times you do mending and washing.

Home Improvement

Goals

- To make the home more comfortable.
- To make the home more attractive.
- To create some useful and inexpensive articles for the home.
- To improve sanitation in the home and its surroundings.
- To care for equipment in the home.

Requirements

- Make two articles that are useful in the home.
    - wall pegs or hooks for hanging clothes
    - hangers for clothing
    - a storage shelf
    - curtains for the windows or between rooms
    - a rug or mat for the floor
- Clean a room two times.
- Clean the compound or space around the house by picking up rubbish and raking or sweeping.
- Wash the dishes and cooking pots four times.
- Keep a record of the work you do.
- Exhibit or demonstrate something from your work at the local club meeting, competition, or tour.

Handicrafts

Goals

- To learn to make useful attractive articles from low cost local materials.
- To develop knowledge and understanding of good design.
- To increase income.

Requirements

- Make at least two articles from local materials - weeds, grass, cloth, wood, cornhusks, or straw.
- Prepare one article for exhibit.
- Demonstrate your craft at a local club meeting or show.
- Keep a record of all the work you do, including any articles you sell.

Training Course for Professional Workers

The training course outlined below is typical of those conducted for junior technical assistants in Nepal. The JTA's are professional extension agents at the local or county level. This was a 15-day course held at the School of Agriculture. Instructors were from the School of Agriculture and the Department of Agriculture.

Moderator - Principal of School of Agriculture

First Day

10 - 12 a.m.	Registration
12 - 1:30 p.m.	Opening ceremonies and introduction Purpose of Training Outline of program Challenge of Extension Extension relations Inaugural address - Director of Agriculture
1:30-2:00 p.m.	Lunch
2:00-2:30 p.m.	Organization and functions of the Department of Agriculture
3:30-4:00 p.m.	Preparation of Key Point Talks

Second Day

10:00–10:30 a.m.	Making more effective use of extension methods to meet objectives
10:30–11:00 a.m.	How to give better method demonstrations - Sample demonstration, "Rag Doll Germination Test"
11:00–12:30 p.m.	Improving result demonstrations - Field Exercise, "Laying Out a Result Demonstration on Fertilizing Wheat"
12:30– 1:00 p.m.	Reporting result demonstrations
1:00– 1:30 p.m.	Lunch
1:30– 4:00 p.m.	Planning and preparing a District 4-L Achievement Day - setting date and place - establishing rules - fixing responsibility - how to prepare exhibits - judging - demonstrations - recognition and awards - recreation

Third Day

10:00–10:30 a.m.	Philosophy of 4-L work
10:30–11:30 a.m.	Rural youth Extension Policies
11:30–12:30 p.m.	4-L targets and calendar of operation
12:30– 1:00 p.m.	Question period
1:00– 1:30 p.m.	Lunch
1:30– 2:00 p.m.	Film - Young Farmers Clubs
2:00– 3:00 p.m.	Rural youth reports - monthly, quarterly, annual, and daily, and field book
3:30– 4:00 p.m.	Questions

Fourth Day

10:00–11:00 a.m.	How to organize a club
11:00–12:00 a.m.	Election of club officers
12:00–12:30 p.m.	Selection of club leaders
12:30– 1:00 p.m.	Questions
1:00– 1:30 p.m.	Lunch
1:30– 3:30 p.m.	Demonstrations on how to conduct a club meeting by experienced and new agents. Club records
3:30– 4:30 p.m.	Questions

Fifth Day

10:00-10:30 a.m.	Importance of 4-L work
10:30-11:00 a.m.	Selecting projects
11:00-11:30 a.m.	Supervising projects
11:30- 1:00 p.m.	Project records
1:00- 1:30 p.m.	Lunch
1:30- 4:00 p.m.	Field trip to visit projects

Sixth Day

10:00-12:00 a.m.	Training local leaders
12:00- 1:00 p.m.	Demonstrations and judging contests
1:00- 2:00 p.m.	Lunch
2:00- 3:00 p.m.	Motivation, incentives, awards, recognition
3:00- 4:00 p.m.	Problem presentation and discussion

Seventh to Fifteenth Day

This period of training was in subject matter and included livestock, agricultural engineering, fruit and vegetable culture, fertilization, poultry, soils, and plant protection.

The following is a typical example of one of the above subject matter training sessions.

Poultry

10:00-10:40 a.m.	Review of poultry practices, targets and policies
10:40-11:00 a.m.	Planning District Extension Poultry Program
11:00- 4:00 p.m.	Movie - Film, "Magic of Egg"
	Crossbreeding, feeding, and housing
	Method demonstrations, each presented by a different agent:
	Assembly and use of approved brooder
	Making and using kerosene lantern brooder
	Cleaning and disinfecting poultry house
	Mixing a balanced poultry ration
	Making an adjustable feeder
	Making a home-made waterer

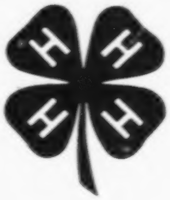
Construction of live foot-bath
Deworming chickens
Controlling internal parasites
Debeaking chickens
Culling non-layers
Selecting hatching eggs

4:00 - 5:00 p.m. Field trip to see poultry flocks

Symbols of 4-H Clubs in the United States

Every country needs to determine which symbols will be most appropriate and meaningful in its program. The following are characteristic of 4-H Clubs in the United States:

The Emblem - The national emblem is a green four-leaf clover with a white "H" on each lobe. These four "H"s represent the four-fold development of the Head, Heart, Hands and Health. This insignia identifies a member of a 4-H Club.



The 4-H Club Pledge is: "I pledge -
My head to clearer thinking,
My heart to greater loyalty,
My hands to larger service, and
My health to better living,
For my club, my community and my country."

The 4-H motto is "To Make the Best Better". The aim is to begin with what the young people have and improve it. This also applies to the member who attempts to grow in knowledge, leadership, character and citizenship.

The 4-H Club colors are green and white. Green represents nature's most common color and symbolizes life, growth and youth. White symbolizes purity.

Local Leader Training

Several countries have conducted excellent training courses for local volunteer leaders. They favor an extended initial training course of one week.

In one year, Thailand held three training courses for local leaders for three weeks each. One hundred and twelve leaders were trained.

Thailand's Local Leader Training Program

The study of local volunteer rural youth leaders in Thailand's Yuwa Kasikorn" clubs revealed that they wanted and needed help in:

- Subject matter
- Project requirements
- Developing a yearly club program
- Making an effective home project visit
- Teaching recreational skills
- Making simple visuals
- Teaching techniques
- Informing and working with people in the community
- Organizing and supervising clubs
- Helping members feel a part of the group
- Giving boys and girls responsibility
- Actively involving all members
- Giving demonstrations
- Knowing the objectives andd philosophy of Yuwa Kasikorn work.

The following observations were drawn from several local leader training meetings:

- Leaders felt that developing community and parent support is very important, but they seemed to lack confidence in their ability to develop this support.
- The leaders had very little confidence in their ability to make yearly club program plans.
- Leaders had surprisingly limited knowledge of project requirements.
- Leaders felt that home economics should be included in the youth program.
- Leaders had very little confidence in their ability to make and use simple visual aids or to teach recreational games to club members.
- They felt that they had gained more from training programs where visuals and demonstrations were used.

These recommendations are based on Thailand's experience:

- Ask some leaders to help plan the program.
- Plan far enough ahead so the teacher can prepare thoroughly.
- Include fewer topics and allow enough time.
- Make the program flexible so leaders can bring up their own problems.

The following five-day training program was based on the needs of Thai Local leaders:

First Day

- Opening ceremony
- Get acquainted
- Have each leader give name, home village, occupation, what he expects from the training course
- Background of rural youth organization
- Origin and history
- Policies of the Ministry of Agriculture regarding the youth organization
- Objectives and philosophy of club work
- Ways of accomplishing objectives

Suggested Methods:

- Illustrated lecture
- Group discussion
- Have experienced leader talk about the satisfaction of being a leader

Second Day

Understanding and working with boys and girls

- The basic needs of youth
- Characteristics of boys and girls at different age levels
- Relationship of leader to young people at different age levels

Suggested Methods:

- Lectures with illustrations
- Case studies of appropriate situation
- Group discussion
- Role playing

Third Day

The job of the local leader

- Organization of the club and holding meetings
- Parent contact (home visit, club meeting, and other events)
- Community understanding and support
- Project selection
- Helping members with records
- Keeping club reports
- Year club program

Suggested Methods:

- Model club meetings
- Role playing
- Group discussions
- Workshop session
- Lecture
- Display of completed records

Fourth and Fifth Days

Help the leader teach others

- Illustrated lectures - use of flannelgraph, actual examples, pictures - group discussion - guiding groups through statement of problem, finding alternatives, making decisions, planning for action
- Method demonstration - suitable topics, steps in preparation, delivery, key points, leaders prepare and give simplified demonstrations
- Result demonstration

Kenya 4-K Club Goals [1]

The objectives of the Kenya 4-K program are geared to the pressing needs of the new Kenya. They are goals which are direct and straightforward. They are goals which reflect my people's and my government's fight against poverty, ignorance and disease. The five major goals of the Kenya 4-K program are as follows:

a. To teach youth improved methods of agriculture. To teach rural boys and girls better farm and home practices which will contribute towards better nutrition, health and a higher standard of living. Generally, these are simple, but essential practices.

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[1] Manual for 4-K Local Leaders and Kenya 4-K Clubs by Agricultural Staff, Kenya Department of Agriculture.

b. To teach youth to appreciate agriculture and the dignity of labor with respect for agriculture as a profession. Farm youth learn that farming with improved methods is more than just digging the soil. It is a better way of life.

c. To help youth to produce food for their families and for sale. Produce food and fibre for home and market. Individual farm youth club projects can provide useful food for the farm family.

d. Develop leadership among the farm youth and adults through this voluntary agricultural program. Prepare young people to be better citizens of the future by teaching them democratic practices and principles. These developing citizens will assume their place in agriculture, business and government. They will also be better prepared to become the future leaders in their farming community as well as in their country.

e. Special efforts to change adult farmers' attitudes and practices. From the inception of our 4-K program we have made a special effort to bring about a change in the habits of adult farmers through the 4-K movement. To help accomplish this, we have emphasized the organization of 4-K clubs to be community based rather than on a local school compound basis. When the farmer observes his son or daughter using an improved practice on his own farm, he relates it to himself and his situation. Often when the same farmer sees his children doing something at school he does not relate this to himself. Thus we have emphasized that the local 4-K club should be organized on a geographical basis. It has been observed many times in Kenya that adult farmers can and do learn from their children's 4-K activities.

Vegetable gardens are a major part of 4-H activities in the Sudan

Pride at public recognition makes even a certificate something extra special when it is presented by a senior official.

Trainees participate in an irrigation method demonstration in Jordan

Participants study seed selection at Afghanistan seminar

Women students at Bukalasa Farm Institute, Uganda, receive tuition in the management of ox teams.

A farmer's wife learning how to "put her hand to the plough" to help her husband modernize their farm - at a district farm institute in Uganda.

When this club was organized in Kitteh Village, Jordan, the village leaders and each boy's father already knew the reasons for club work. As a result, all the fathers were present and each agreed to let his son have a project of his own.

Recreation should be an important part of every youth club program

Method demonstrations are an effective way to teach new techniques. Here a Kenya agricultural extension worker shows members of a 4-K Club how to plant potatoes.

Club tours are important. Leaders can check the programs of a member's project and club members can compare other members' projects with their own. Here a 4-K member from Kenya proudly shows his cabbage project to his agricultural extension worker, his local leader and his fellow club members.

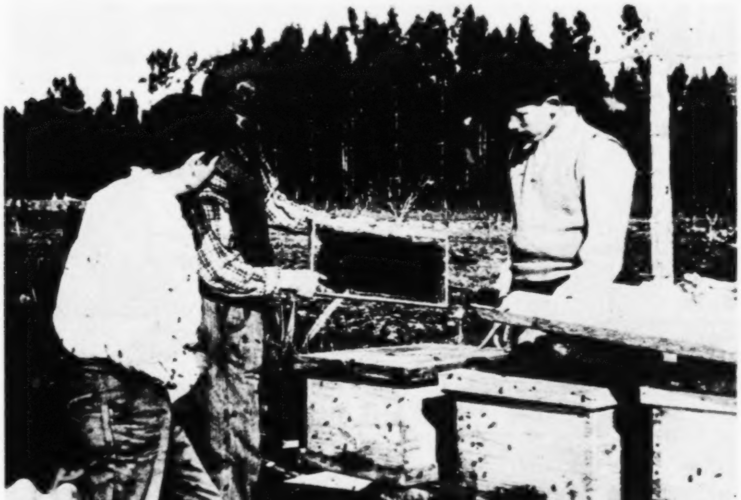
Rural youth club members often adopt improved practices before their elders do. In fact, the success of a club member's project is often what prompts adults in the community to try these practices. This young Colombian 4-S club boy is making a terraced garden in the hills of Boyaca.

The Kayunga Boys Club, Uganda, built its own club house out of mud blocks made with this machine.

HOME INDUSTRIES
PERLITA PAÑGILINAN
BILAO MAKING
Split bamboo into strips ½ inch wide
GARDENING

Contests are popular activities. Philippine 4-H members who win local and district contests have a chance to compete against each other at the National 4-H Rally. The girl above demonstrates basket weaving, while the boy below shows how to graft buds onto trees.

Club buildings are not essential. Four-K clubs in Kenya usually meet on or near their members' home farms - or outdoors under a tree



Chilean agricultural extension workers instruct 4-C club members in many farm activities, including bee-keeping.

Rabbit-raising is a popular project in Taiwan. Rabbits are easy and inexpensive to raise, take little room and supply high protein which is badly needed in many countries.

Many countries offer poultry and livestock loans to rural youth club members. This young man in the Philippines received chicks on loan from his school. He will repay the loan later in eggs.

Group of trainees enact a skit on how to properly plan and carry out a combined method and result demonstration - Sabah, Malaysia.

A club in Taiwan built its own meeting place out of local materials and is now working to improve and beautify the grounds around it.

Demonstrations serve several useful purposes. They teach club members how to speak before an audience and help them gain self-confidence. Two 4-F boys from Ecuador show how to prepare cold frames.

Club members of the Gbarnga District of Liberia demonstrate how to control garden insects, transplant seedlings and plant seeds in a scaffold nursery.

The Korean 4-H Club Livestock Bank makes loans to eligible club members for livestock and other project materials. This Korean 4-H Club member shows off the young Hampshire pig he received from the Livestock Bank.

Vegetable gardening has been one of the most popular and successful 4-S Club projects in Guatemala. Net sales from this boy's project paid for his school clothes and supplies.

4-H members teach other members in their home villages how to work with wood, iron, earth (blockmaking) and rock to improve houses, farm buildings, fences and farm tools

Hukam Singh, former president of the Garhia Rai Singh Rural Youth Club in India, introduced silk culture in his village. Almost all families in the village now grow silk.

Foto
HEALY
MAS Y MEJOR CARNE!
208

One of twenty-two large floats on agriculture - Independence Day Parade, Panama City

SALON
Coca-Cola
ALAMEDA
ARADO DE DISCOS
TRACCION
MECANICA

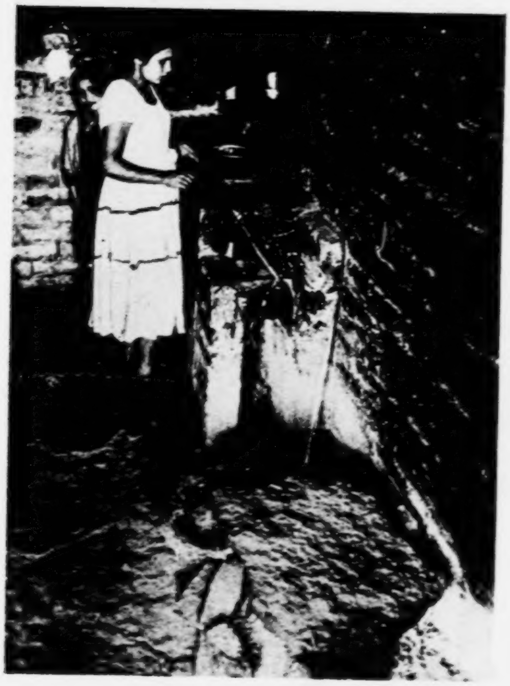
Man power, animal power and machine power showing growth and development of agricultural methods - Independence Day Parade, Panama

Experts of Iran and FAO giving a lesson on good nutrition with use of visual aids to village girls in Iran.

A Panamanian home economist shows women at a local fair how to build a smokeless stove

Home demonstration agent of Lauras County, Brazil, shows several 4-S club girls some of the finer points of sewing.

Fidelina Maldono, club leader in Honduras, is skilled at making hats, purses and handbags out of corn husks - a waste product. She teaches the art to her club girls and they sell their products in Tegucigalpa.



Home improvement is often basic and simple. In this Colombian kitchen, the stove was once three stones on the floor with a pot set on the stones and smoke filling the room. Now this 4-S club girl has a waist-high stove with a chimney and three burners (note old stove on the floor).

India - Using a home-made flannelgraph

ECUADOR
¡ADELANTE!

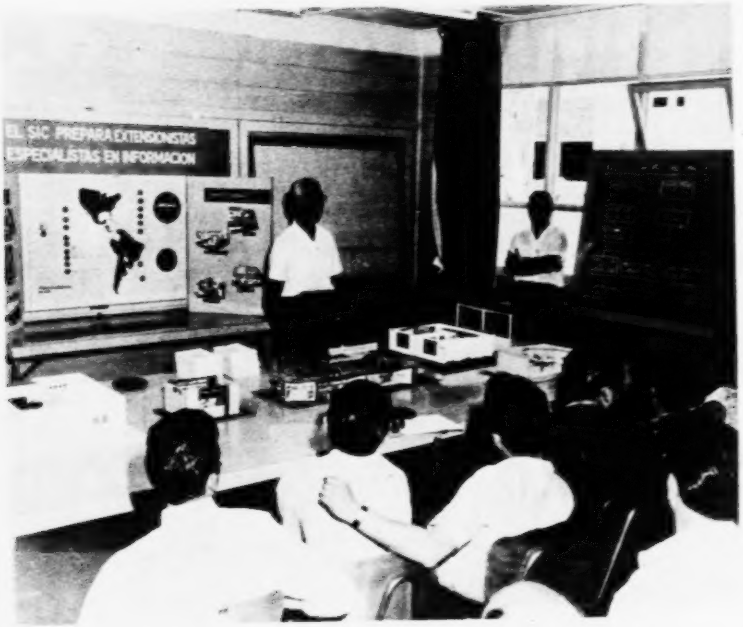
Ecuador: Food preparation demonstration by extension home economist

Bolivian extension information specialists use puppets as an effective means of reaching illiterate people.

房藥動流局醫獸
VETERINARY DEPARTMENT TRAVELLING

A travelling dispensary of the Veterinary Department of the Government of Singapore in operation in a rural area.

One of the mobile units used in Korea for extension purposes.


EL SIC PREPARA EXTENSIONISTAS
ESPECIALISTAS EN INFORMACION

A 3-month communications workshop for young agricultural information and extension workers from Latin American countries. In the foreground are models made by students for a complete village agricultural fair.

Benjamin Patiño, extension radio broadcaster, recording interviews with Panamanian farmers at a field demonstration day.

الأفرخ
كتكوتك
وفرله
الدفئة
النظافة

Production Section, Arab States Fundamental Education Center
Sirs-el-Layyan, Menoufia, Egypt

Spraying cattle against external parasites is part of the free veterinary service program initiated in Sirs-el-Layyan area, Egypt. Trainees specializing in extension service cooperate with local veterinary people in doing the job and teaching the farmers.

Agricultural extension agents teach farm mechanization to 4-S members in Guatemala

Goodwill Committees or "Embajada de Amistad" are chosen from delegates to the national 4-S camp in Guatemala. The committees visit friends of 4-S to review their own experiences and personally thank them for supporting 4-S work.

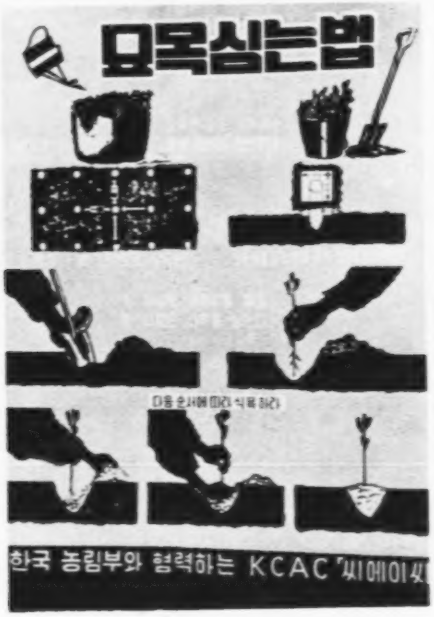
OPERACION NINOS

Teaching good nutrition in a public area in Quito, Ecuador

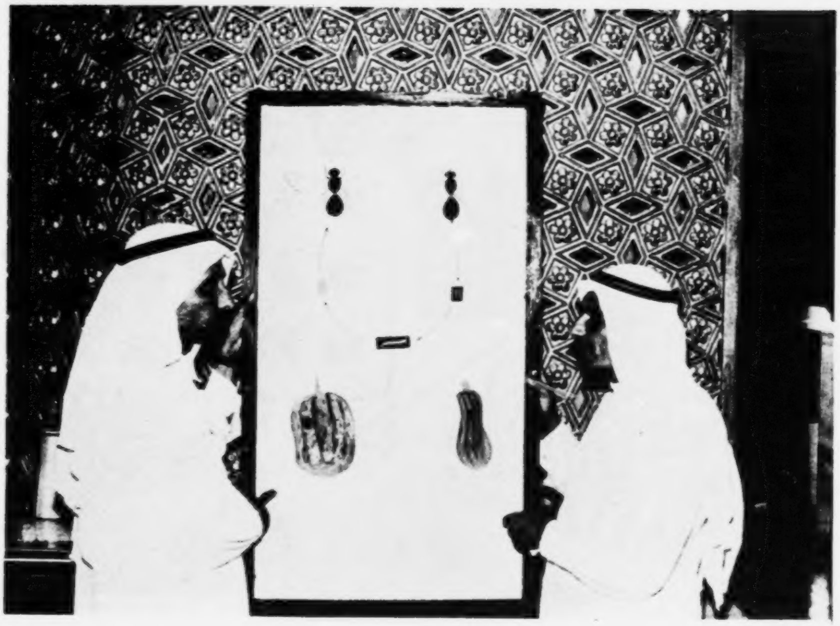
A typical kiosk found throughout Korea where the public can obtain useful information by the extension services

CLUBES 4-S
COSTA RICA
Guia da
PRODUÇÃO de PORCOS
HAMA TIKUS
CONSTRUYA UN ABREVADERO
el informador agricola
درمیدان جلالیه
ASCAR
Suinos

Examples of simple leaflets produced and used by extension services in various countries

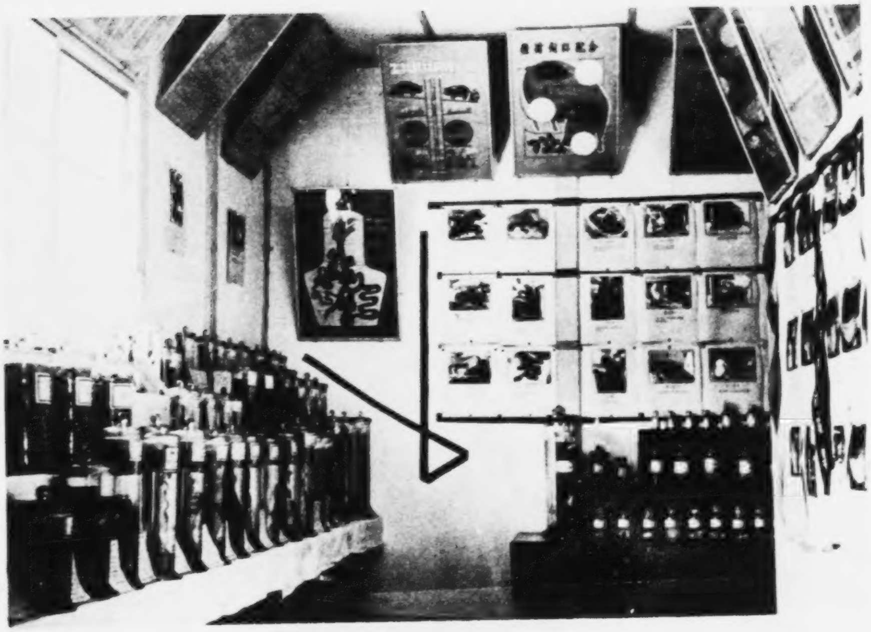

묘목심는법
한국 농림부와 협력하는 KCAC 씨에이씨

Highly-illustrated posters like this are widely used in Korea to disseminate agricultural information in cities as well as rural areas.



Jordan extension workers inspect visual aids used in training and field programs

Bolivian teacher in the Altiplanos uses a simple paper chart and a blackboard for instruction



A typical local extension office museum of agricultural specimens - plants, seeds, pests, insects, diseases, etc. - Taiwan

कल कल कलकल
कम कम कमकम

An extension worker in the Middle East teaching with paper signs and diagrams

Section III - EXTENSION TEACHING

Extension Teaching is an Art

Joseph Di Franco [1]

Teaching should be the art of helping someone else in his effort to change himself (i.e. learn)*.

Have we in extension acquired this ability? If not, why not? Is it because we only look upon our work as a job or a means to earn a salary? Certainly this is important but what about the reason for this job being a paid one. If there is a price or salary it must be for a purpose. We come back full cycle than that the job of extension is to teach others. For our efforts we are getting paid. Yet if we are not teaching we are not earning our pay. Going through the motions, planning, holding meetings, giving lectures, etc. may take up most of our time but end in poor results. Teaching is more than just a job. It is also an art. Are we artists? Just as a painter may study use of colors and techniques, he may spend much time planning what he wants to paint, he may spend his energies putting paint on canvas and yet he may not come up with a picture he is satisfied with or others may enjoy. Is he an artist? Certainly not until he changes the canvas into something of beauty or meaning is he recognized as a true artist. The same is true of teachers. They may work at the job but never become true educators. Fortunately the art of teaching can be acquired. Once the science of teaching is learned and sufficient practice has taken place teaching can result in effective learning.

This will not happen:

1. If the extension worker is not sincere in his desire to work with people. This is the "canvas" he must convert into meaningful action. He must want and like to work with people. Unlike a painter who works with abstract things, oils, brushes, canvases, the teacher works with human beings.

2. If he does not thoroughly understand what the individual's needs, motivations, desires and resources are, he must work with something the individual can be taught to accept and understand as important to himself not only what the teacher believes is important. It becomes an action of both teacher and learner. Teaching is not a one-way action or an end in itself.

3. If he considers education so important that he uses coercion to obtain his ends. This only defeats the very thing we are trying to accomplish - to help people change themselves not force them to change as many have tried to do in the past. History is full of such stories where leaders have tried to force upon individuals what they thought was good for them through laws, edicts, punishment and drastic means.

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[1] Joseph Di Franco - Extension Specialist, FAO Rome, Italy

* Adult Education XVI, Number 1, Autumn 1965. Editor's notes. Thurman White, page 2

4. If he underrates his audience. Too often teachers and extension educators in particular, lose patience with their students. Some even believe that it is a hopeless task to teach rural adults, or certain classes in society. It certainly is a hopeless task because with this attitude the teaching exercises are doomed to failure. The truth is the right way has not been found or applied by the teachers. The very essence of education is to help people change; this can be done at any level, class, group or locale of the individuals if the right attitude and methods can be found.

5. If he does not know the techniques, methods and skills of teaching. The teacher, in addition to having sincere interest, believes in education and believes that those he serves must know how to do the job. He must learn the advantages and disadvantages of his methods for specific purposes. A person who only has a desire but does not know how to do the job may be well liked but he will not help people learn. Nor can he ever acquire the satisfaction of real accomplishment.

6. If he does not know his subject matter. This is the purpose of his teaching - to teach something! The changes of knowledge or skills he wishes to bring about are the objectives. It is fundamental that a person know his subject matter. In the case of extension personnel we would add, or know how to acquire the subject matter (through specialists).

Thus if we are to become proficient as extensionists (teachers) we must:

1. Be sincere in our desire to be teachers.

2. Understand the desire, needs and interest of those with whom we work.

3. Believe in education but not so strongly we want to use force.

4. Not underrate those we wish to help.

5. Know the techniques, methods and skills of teaching.

6. Know the subject matter,

Unless teachers are able to acquire these qualifications they will only be teachers in name but not deed. They will draw their salary and may have a professional title, but they will not be educators. This applies to extension workers. They too must become educators in the full sense of the word. Once they accomplish this ability they can join the group of successful teachers who are the artists of their profession.

Teaching vs. Learning

Joseph Di Franco [1]

All of us involved in teaching have accepted a responsibility that tampers with other people's lives. There are laws in every land that are supposed to protect people from interference from others. There are fines and punishments imposed whenever people are guilty of this kind of interference. Yet teachers are permitted to go on not only tampering with adult lives but with the lives of children. Of course, it is assumed that teachers interfere with lives with beneficial intent. Naturally we have accepted this role of the teacher as a useful role or there would be regulations against it.

1/ Joseph Di Franco - Extension Specialist, FAO Rome, Italy

But do we as teachers really understand our role as: (1) interfering, (2) as beneficial, (3) as a responsibility. In my case I must admit that I did not think this deeply although I have accepted the plaudits given the teaching profession. In most cases, I think teachers have considered teaching as a job which required a certain amount of effort necessary to justify the salary. The effort entailed: being on time, being in a certain place, carrying out the administrative details, making required reports and attending a minimum of social functions necessary to the position in the organization and community. Oh yes, there are also routine classes, assignments and activities necessary for completing the annual teaching program.

But where was the "learning" process in all this. Did we "learn" people, as some old timers used to say or did we judge learning by the number of meetings we held, number of lectures we gave, number of chapters in a book or books we covered, number of days work completed, etc. Did we bring about change or did we assume change took place because we completed a program or project?

I think it becomes very necessary that we start at the beginning and develop an awareness of our job as teachers to bring about beneficial change in people or as we put it "help people learn."

The process of learning has been stated in many ways but in each case it is implicit that the process takes place in the recipient or learner.

Before a person learns he must:

1. Notice something.

2. Want something

3. Do something.

4. Get something.

Expressed in other words we can say the steps in the learning process involve:

1. Awareness

2. Need

3. Action

4. Satisfaction

Good teachers take these steps into account. The formula is not a precise one, however, nor is every teaching situation exactly alike. But regardless of the time, place or people involved, learning does not take place unless the "learner" experience these phases.

Extension agents or teachers working with adults have the same problems. They must work harder at the job of teaching because they operate under a process of education that is not compulsory but involves voluntary students or participants. In extension the objective is to bring about change in an individual, meaning in most cases that before the new skill, practice or idea is accepted an old one must be discarded. Thus the emphasis on motivation of the individual to act must be convincing. But once the individual is convinced, he will act. It is at this stage that many agents claim success. We must admit that this is what extension is striving for. Unfortunately too many stop at this stage. Unless the individual receives satisfaction as a result of his actions, success cannot be claimed. The individual will reject the new and regress to the old idea, skill or practice.

In other words teaching may have taken place but learning has not. Successful teaching depends upon the individual making a "permanent" change. The teacher cannot rest upon the fact that he has presented knowledge, he must prepare the "learners" so that they notice, want, act and are satisfied.

There are two definite roles for the teacher:

1. To prepare the "learner", and

2. Present knowledge.

Too often teachers fail to do one or the other well enough. Failure in teaching can always be traced to the failure of the teachers to take the "student" into account or they failed to be sure of their facts (knowledge).

Extension agents have a greater responsibility in the teaching process because they must live with their "students". The agents future is dependent upon the success of the people who have learned, not in how well the agents may feel they have taught.

Extension educators need to study and become skilled in the art of teaching. The art of preparing people so they can learn and the art of presenting knowledge that people can learn. They must not, however, become so concerned in the art of teaching that they lose sight of the ultimate objective which is: that people make desirable changes - "learn" something.

Chapter 7.

EFFECTIVE COMMUNICATION IN EXTENSION [1]

Extension education is essentially a process of communication—communication of ideas and skills between and among people. It includes the transfer of technical information from its source to the farmer or villager, but it is more than that. Technical knowledge is of no use unless it is accepted as authentic, is adapted to the needs of the villager and is put to use. Furthermore, the villager may not understand the information and need to ask questions. He may have special problems for which the extension worker must find answers. He may require more information. Therefore, an exchange of ideas back and forth between teacher (extension worker) and learner (farmer) is essential.

Ability to communicate determines to a very large degree the success or failure of an extension worker. He has technical information from research and other sources. It is his responsibility to establish effective communication with the people he serves so they use this information to continually improve their agriculture and rural life.

Let us examine this process of communication as it is used in extension teaching.

The Teaching Situation [2]

The teaching situation is the actual coming together of the extension worker and people whom he serves. It can be an informal meeting like a farm and home visit, or office visit when the farmer comes to see the extension worker. It can be a demonstration by the worker or a local leader. It can be a village meeting where the extension worker shows a film then gives his own talk and answers questions.

In short, a teaching situation may develop wherever the extension worker is. The worker should always remember he is or can be a most important element of a teaching situation. He can not get away from teaching situations because he is first and foremost a teacher, a teacher who brings extension education to adults.

When I first began in extension, I replaced a man who was retiring after 33 years as an extension worker. He told me, "Never let the people down. They expect you to be their agricultural teacher wherever you are. At any kind of agricultural demonstration or meeting, at picnics or any kind of social or official gathering, you are an educator first and a citizen second. Don't forget that!"

The teaching situation is the opportunity for the extension worker to teach, but it just does not happen by itself. Creating an effective situation is mainly up to the worker. He whole program will stay on papaer or in his mind and will never materialize unless he makes it come alive. He does this by setting up teaching situations, hundreds of them. Each one is designed to move one extension objective or a definite part of one into reality.

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[1] Edited by Lyman J. Noordhoff, Extension Specialist, Office of International Extension, Federal Extension Service, U.S. Department of Agriculture Washington D.C.

[2] Communication in Extension as Developed for Western Nigeria - Western Nigeria Ministry of Agriculture and Natural Resources p 3.

Communications Process [1]

S - M - C - R

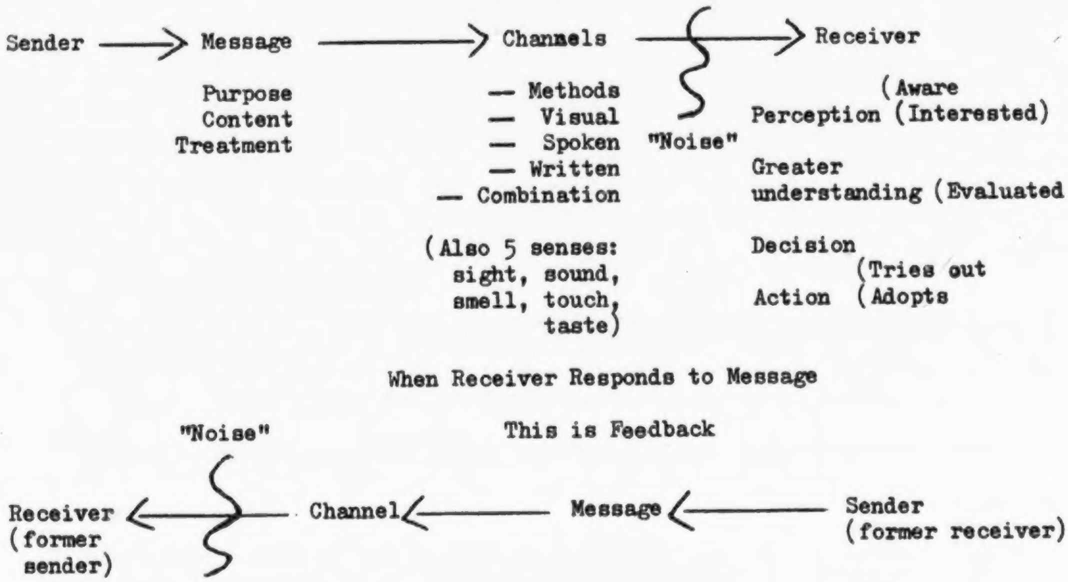
Sender
Message
Purpose
Content
Treatment
Channels
— Methods
— Visual
— Spoken
— Written
— Combination
(Also 5 senses: sight, sound, smell, touch, taste)
"Noise"
Receiver
Perception (Aware (Interested)
Greater understanding (Evaluated
Decision
Action (Tries out (Adopts
When Receiver Responds to Message
This is Feedback
"Noise"
Receiver (former sender)
Channel
Message
Sender (former receiver)

Figure 7-1

The communication process (S-M-C-R) consists of four essential elements: (1) Sender or communicator of ideas or information, (2) Message to be transmitted, (3) Channel or means of communication and (4) Receiver of information or audience.

When an extension worker talks with one farmer, the extension worker may start the conversation; therefore he is the sender, what he says is the message, the spoken word is the channel and the farmer is the receiver. When the farmer replies the roles are temporily reversed. The farmer is the sender and the extension worker becomes the receiver. Farmer's response is called feedback.

The Communicator A Teacher

The communicator (sender) is the originator of the communication. We as extension workers must take the initiative to establish communication with rural people and keep it functioning. Hence each of us is the communicator during much of the communication process. The communicator requires credibility. He needs to be believed and to have the confidence of his audience. An extension worker can improve his credibility by learning to communicate effectively. A good communicator — [2]

1. Knows his audience, its wants and needs; knows his message, its content and how to present it; knows effective channels of communication to reach his audience with his message; and knows his own abilities and limitations

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[1] Lyman J. Noordhoff - FES, USDA, Washington, D. C. Adapted from Sander's "Cooperative Extension Service. Prentice-Hall 1966 p. 53

[2] Communication in Extension as Developed for Western Nigeria - Western Nigeria Ministry of Agriculture and Natural Resources p.4

2. Is interested in his audience and its welfare, and how his message can help; is interested in improving his skills in communication

3. Prepares his messages carefully, using appropriate materials and devices to elicit interest and insure a successful reception of the messages

4. Speaks clearly

5. Uses words and language the people will understand

6. Realizes that mutual understanding between teacher and learner— a common bond — is mostly the teacher's responsibility

7. Is aware of the limits of time; does not try to unload the whole burden of any topic at one time; chooses only those parts most appropriate for the particular teaching situation; does not keep learners too long at one time (boredom sets in sooner than you think).

Of course the opposite of a good communicator is a poor one. He . . .

- Fails to bring messages really useful and appropriate to learners
- Fails to give the complete story and relate it to the learner's problems
- Forgets that time and energy are needed to absorb and "think over" new ideas
- Keeps on talking while others are not listening
- Fails to develop credibility
- Fails to know and understand the values, customs, prejudices and beliefs of the learners
- Fails to start where the learners are in knowledge, skills, interest and need.

The Messages

We, as extension teachers, have important information and ideas which we hope our audience will receive and interpret exactly as intended. Often this is not the case, due to incomplete information, poor presentation or other reasons. To help avoid these difficulties we need to consider our purpose, the content of the message, and how we present it.

Our purpose or objective should be clearly in mind. What change in behaviour do we want to bring about? It can be a change in knowledge, attitude, skill or in what we expect the audience to do.

The content of the message should be relevent to the receiver. That is, it should be something of interest to him. It must be related to something he understands, feels or thinks; something he can accept.

The treatment of the message does much to make it acceptable and understandable to the receiver. It should be logically organized and in terms he or she understands. Furthermore, it should conform to accepted social standards. Treatment can make a message interesting or dull and boring.

Channels of Communication

Extension of teaching methods are channels of communication with the people served. These methods may be classified as visual, spoken or written. (Some are combined methods, like movies). Each has its advantages and disadvantages.

"Seeing is believing" is an axiom of extension education. Picture writing is an ancient form of communication, Pictures, charts, diagrams, exhibits and posters perform vital communication functions in the most advanced societies. Visual and oral methods are about the only methods for extension workers to serve illiterate peoples. Method and result demonstrations were so useful in early extension work in the United States that the local extension worker was called a "demonstration agent".

Spoken methods include individual contacts such as farm and home visits, office calls, meeting of all kinds, radio and television and telephone calls. Except for radio and television, they allow two-way communication, a big advantage. Lack of understanding can be detected and cleared up on the spot. Not only words but gestures and expressions of both speaker and listener contribute to clear communication.

But there are also disadvantages and obstacles to be overcome. Since an oral message is not recorded, the receiver may remember it differently than the sender meant it. Where precise instructions are only spoken, the receiver has no way to refer back to what was said.

Only a limited number of people can be contacted face-to-face in a day. This makes most oral communication expensive. Language can be a problem. Where extension worker and villager speak different languages, spoken communication requires a third person as interpreter. This is awkward and slow and may distort the message. Even when both extension worker and villager speak the same language, words have different meanings and can be misinterpreted. Fortunately, through repetition and questioning, those misunderstandings can often be detected and corrected.

Radio has enabled millions of villagers to receive information of all kinds, especially since the introduction of inexpensive, transistor models. Radio and television are used extensively in extension education in both advanced and developing countries. These are fast, and inexpensive methods of disseminating information. Disadvantages are that communication is only one-way, information cannot be adapted to local conditions and the extension worker competes with many other communicators for attention and response of the audience.

In spite of its problems, spoken communication when supplemented with visual aids is a basic method of extension work with illiterate societies.

Written communication is indispensable in day-to-day operation of any organization, including extension service. Technical information and instructions must be distributed to the staff. Records and reports must be prepared, kept available for use and submitted to superiors. The public must be kept informed of activities and accomplishments.

Written communication has greater status and carries more authority than oral communications. Letters, bulletins, circulars, news stories, annoucements of events and magazine articles contribute to extension education in literate societies. They provide a low-cost method to disseminate information to large numbers of people. But again this is mostly one-way communication. Few people will change their methods of farming or homemaking only because they read about it. However, when interestingly prepared, such information will attract the readers attention and may stimulate him to seek more information. Among illiterate people, written information is of value to the extent that the few who can read pass on information to others.

The effective extension worker will adapt his teaching methods to the subject, to the communication skills of his audience and to the facilities available. Usually he will use two or more channels of communication in the same presentation.

The Receiver or Audience [1]

The audience are those whom the communicator wishes to receive, understand and use the idea. If the audience is to make progress, the extension teacher somehow helps them to change — change their knowledge, attitude or behaviour. If no change takes place there has been no communication—no progress. Communication has taken place if the cultivators learn facts about the new wheat (knowledge); or if some of them begin to feel the new wheat may offer some advantage (attitude); or if some decide to try it (behavior).

The significant thing to remember is this: while people in general are rather similar, they also differ in thousands of ways—nearly all the result of past experience. Often some of these differences block communication.

Differences in education mean different abilities to understand difficult concepts and technical language. For this reason communication often fails because the communicator uses language too hard for his audience to understand. An extension worker cannot expect much progress in getting his people to build sanitary latriness or to control flies and mosquitoes if they have not first learned the germ concept and the relationship between micro-organism and disease.

Good extension teaching, therefore, requires a thorough study of audience. This means their abilities, backgrounds, interests and previous accomplishments. The more we know about the audience, the better job of teaching we can do.

Furthermore our knowledge of the groups with whom we work will help us plan our approach to them and select the best methods to use.

An extension adviser was assigned the job of working with villlagers in a remote province. Arriving unannounced, he found no one in sight. People suspected any stranger, so he faced a real problem. He had to make contact with the village elders before he could get anything done.

The adviser want casually to an open space and started drawing figures in the dust with a small stick. Youngsters soon appeared. As a small group gathered, he gradually overcame their shyness by entertaining them with little tricks and games.

Before long most of the children had gathered around him, enjoying themselves thoroughly. Gradually some of the parents edged in cautiously. After watching the action for a time, they too began to smile. This way the extension worker made contact with adult villagers through the children.

By understanding his audience and by the use of simple visuals which they could understand, this extension worker was able to communicate effectively in what otherwise might have been a difficult situation.

A communication theorist would call the villagers' suspicion of strangers "noise". Noise in this sense is anything that prevents a message from getting through to the intended audience. Noise may be fear, prejudice, inability to grasp the idea or any of many possible barriers.

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[1] Using Visuals in Agricultural Extension Programs - United States International Cooperation Administration pp 11-12,15, 16-18.

The point is that good communicators anticipate and try to prevent noise if they can. And they are ready with means of overcoming barriers in case they arise.

Communication failure also may occur when the idea being communicated seems contrary to accepted local customs and beliefs. This too is noise. Recognizing this danger beforehand and planning alternate approaches to the problem is an essential part of successful communication.

The attitude the sender conveys to his audience often affects the transmission of the idea. If the communicator seems to his audience well informed, sincere and respectful of those to whom he is speaking, he is more likely to succeed in transmitting his idea than is the person who seems poorly informed, disinterested, insincere or disrespectful of his audience.

To those who would go out and work effectively with people, let it be clear that there is no basic competition among the methods or channels of communication. The challenge is that of making meanings clear and of getting ideas accepted. To this end you will need to use all of the methods of communication readily at hand and improvise others as you go along. It is a question of getting the proper combination of channels for the job at hand.

You will find visual materials and methods to be a major help instead of an incidental one. With their help and an understanding of the communication process, you will get the job done.

How and Why Adults Learn

Stated simply, learning is that kind of activity by a person which causes him to be different in some way afterward. And because of his action, he:

- Adds to or changes his previous information or knowledge;

- Does some task or operation differently than before; or

- Changes his attitude or point-of-view about something.

How does a farmer learn new facts, improved farming practices? How do his long-established attitudes or ways of feeling become changed?

Let us use the father, Ahmad, as an example. At wheat threshing time, Ahmad hears that his cousin in another village has threshed out the largest yield of wheat he has ever grown. It was a much greater yield than Ahmad himself received that season.

A few days later he visited his cousin to see his wheat. It looked like very good wheat. It was a different variety than previously was grown in any of the villages in that region. The landlord had given his cousin the seed; he had also given seed of this new variety to several other farmers in his cousin's village. Nearly all of them had harvested more wheat than they had for many years.

Some farmers in his cousin's village had planted the same wheat as formerly and had harvested about the same yields as usual. Ahmad learned. He learned that there can be a big difference in what varieties (new knowledge); he also learned that sometimes it pays to try new ideas (change in attitude).

Learning starts from an interest in something or a felt need for something. The learner does things—becomes active—so he can satisfy his interest or need.

Ahmad's son feels a need to learn to use the sickle skilfully, not because he enjoys harvesting the grain, but to be like other boys of his age. He also feels a duty—the need to help his father with his work. Also, Ahmad wanted to see and then plant the new wheat (he was interested) because it will produce a larger crop and add to his small income. He needs every bit of extra money he can earn for his family. It also gives him satisfaction to produce good wheat and to know that his neighbors think highly of him.

Successful extension workers always begin their work with farmers by finding and using these interests and felt needs. Through gaining satisfaction in these, farmers develop confidence in themselves and in the extension worker and will seek his advice in other problems.

New learning is built upon previous experience. Previous learning or experience serves to stimulate new learning. This is especially true if the previous experience was satisfying and vivid. Ahmad's son learned to use the sickle quickly because he had watched his father harvesting wheat so many times.

This is association—that is building new learning upon previous experience. It is the fundamental principle of all learning. The extension worker uses it in almost everything he does. He begins to work with the farmer as he is. He learns how the farmer thinks, what are his attitudes, customs, fears, inhibitions, habits, his skills. Each of us is a product of many previous learnings, experiences, attitudes, fears, customs and laws imposed by others.

A skillful extension worker knows and uses some of the natural, human tendencies related to learning. Man has a tendency:

- To seek and enjoy the presence of others
- To seek and enjoy the approval of others and avoid their disapproval
- To be aggressive or self-assertive. This explains how some individuals rise from the group to become leaders. Those less aggressive will follow good leadership
- To be ruled by his emotions, such as liking and disliking others, joy, sorrow, fear, pride, envy.
- To be visual-minded—that is, he is especially receptive to things seen as compared with things heard

Village farmers very likely will respond to teaching methods in accord with those tendencies. They will tend to reject or resent methods which conflict with these tendencies.

Farmers who learn from a good extension teacher will remember. The successful worker uses several techniques to help people remember.

Some of these are:

1. Be sure people are deeply interested in what they are learning. This means that they must really want to learn and are ready to change.
2. Be sure they understand very clearly each step of the learning and the relation of each part to the whole.
3. Use words that are simple and familiar. Use as few words as possible. Once they are spoken, words are gone forever.
4. Supplement talking with clear demonstrations and with illustrations from the learner's experience. Use vivid images, interesting symbols. It has been proved that people learn better and remember longer what they have seen than what they have heard.

5. If possible, learn by doing. Have each person actually do the skill to be learned several times. Watch each learner carefully and correct his mistakes at once. We learn errors as well as correct things.

6. Teach information or skills as near as possible to the time it can be used. Example: teach insect control just before the time when insects will appear.

7. Be sure that each person uses the information or skill to his own benefit. If it does not benefit him, help him understand why.

Steps in Learning

Consciously or unconsciously, every person goes through certain mental steps before changing his ideas or practices. The wise extension worker understands this process and fits his teaching into the present thinking of his audience. Psychologists vary in the way they divide this process into stages, but essentially it is more or less continuous progress in thinking and changing attitude toward the subject. These steps overlap and form a continuum of mental growth concerning the idea.

Every person goes through five clearly defined stages while adopting a new idea or practice. These are awareness, interest, evaluation, trial and adoption. Together these make up the adoption process. Three other mental processes also take place during these stages. These are desire, conviction and satisfaction.

Steps in Adoption Process 1/

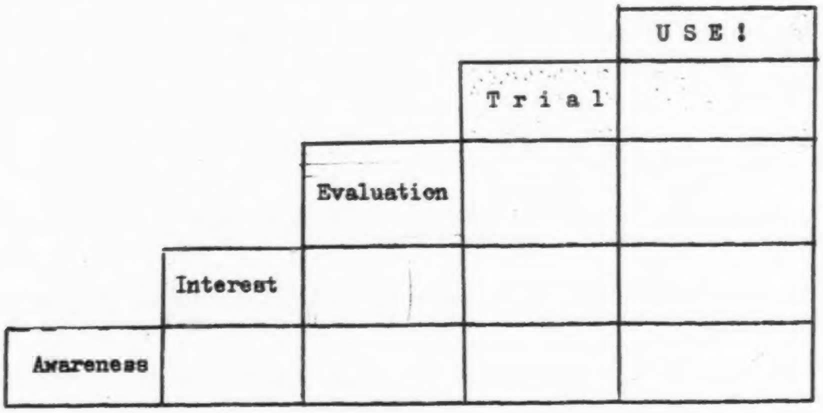

Figure 7-2

Each step in adoption process depends on preceding steps being completed. Yet too often extension workers recommend practices "too far ahead" of rural people. We urge them to try a new rice variety, but actually they are only interested in it. They do not understand and we fail to teach, because our message is too advanced. Try always to first learn what stage of adoption process your people are in. Then send information related to that stage, or only one step higher. That way, you will communicate at their level.

1/ Lyman J. Noordhoff, Extension Specialist, Office of International Extension, Federal Extension Service, U.S Department of Agriculture, Washington, D.C.

Awareness of a new idea or practice is the first stage in learning to use it. A villager may see a neighbor's new variety of wheat or rice that looks better than his own. A housewife may hear for the first time that she may use dried milk in the diet. Often the first stage of an extension educational program is to inform people that there is a new variety of grain or new form of milk.

If the new idea or practice affects the villager, he or she may become interested in getting more information. Is the new wheat as good as it appears to be? Will it actually yield more than the old variety? How can dried milk be used? This step is also the beginning of evaluation which will continue until the new practice is finally adopted or discarded as impractical or undesirable.

If the additional information is favorable, a desire for the advantages of the new practice takes shape but the villager is cautious. He knows what to expect from the old variety of wheat under varying conditions. But he does not know how the new variety will withstand drouth or wind storms. Therefore, he sows his own small, trial plot of the new wheat or watches several neighbors try it on their fields with soils and growing conditions like his own. He watches it grow and compares it with commonly grown varieties. At harvest time he examines the grain, estimates yield and again evaluates results. He may also inquire as to marketability of the new wheat. Possibly the miller finds the new wheat has different milling qualities than the old variety.

Assuming all factors are favorable, the villager becomes convinced he should grow the new variety and he plants it the next year. He has adopted this practice. But he may still be somewhat concerned last some weaknesses appear in the new variety. If it continues to do well he has satisfaction with his decision to change to the new variety. Otherwise, he may change back to the old variety and no permanent change in his actions or attitude has taken place.

Many negative as well as positive influences affect each person's decisions to change his attitudes and actions. Fear of change, fear of the unknown is a basic influence. What will this new idea do to me? Fear is overcome by familiarity. Facts are an antidote or cure to fear of the unknown. A farmer may hear rumors and opinions for and against a new variety of rice, but if he sees it grown, sees the yield computed, eats the rice and likes it, his doubts are dispelled.

Change results from personal decisions and these are affected by beliefs, emotions, customs, tradition and many other values, as well as knowledge. When facts are not available, decisions must be based on traditional values. This seldom produces economic and social progress. As extension workers, our task is to bring new facts (technical information) to people and help them use these facts to make important decisions.

Motivation of Rural People

A motive is something that prompts a person to act in a certain way. It is an incentive. We in extension education must persuade or motivate people to want technical knowledge, to use it and to adopt a progressive attitude toward change.

Commercial advertising and propaganda also try to motivate people, but through different means and objectives. Advertising and propaganda may restrict their use of technical information and other facts to favor the product or idea they are promoting. In extreme cases they will depart from the facts in trying to further their own interests.

Education requires unbiased presentation of all facts pertinent to the decision to accept or reject the idea or practice. Departure from the best available information cannot be tolerated.

Advertising and propaganda have the self-interests of the advertiser or propagandist as their objective. Education is entirely in the interest of the recipient—the farmer or villager.

Commercial advertising in United States has long been one important source of farm information. Much of it is educational since it supplements and repeats extension teaching. Thus both private companies and government education benefit. New ideas move into use faster.

However a small minority of advertisers sometimes present biased, misleading information. This hurts rural people and the company itself, because sooner or later people will discover this and stop buying their goods. To the extent that advertisers confine themselves to the facts and present the facts in perspective, their activities may be considered education and contribute to social and economic development.

Life may be thought of as a continuing effort to satisfy a series of rising needs, from survival to fulfilling our greatest ambitions or attaining the "good life".

Survival may be considered the basic need of man. Food, shelter and protection from harm are essential to life itself. But when a person is well-fed,comfortable and safe from attack, he feels a new need for assurance that he can survive in the future. Will he have enough to eat tomorrow, next week, next year? Will he be protected in case of storm or drouth? Will he be safe to continue to produce or procure his necessities? This is security, the second basic need. If he lives in a modern society, job security, savings and life and health insurance help satisfy this need.

Group acceptance is a third basic need. Not only does one feel a need for "belonging" to his group, tribe, church or organization, but his acceptance by the group contributes to his own security and even to survival. The family takes care of its members who are ill. During food shortage, the community may take joint action to secure needed supplies. Some church groups take pride in caring for their own unfortunate members rather than relying upon government to do so.

A member of a group likes to be recognized for his achievement and his contribution to the welfare of his group. He likes also to have a voice in group decisions and be looked to for advice in his own field of competence. This is recognition, a fourth need of people in any society.

And finally when these four needs are satisfied, a person needs to feel he has been successful. This is fulfilment. Then he or she has achieved the greatest potential as a farmer or homemaker, and as a citizen.

A wise extension worker will study his community and its people, try to determine which kind of needs they consider to be most important and base his approach accordingly. Too often foreign technicians try to appeal to a persons loyalty and public spirit when the person is worried about the present and future food supply for his family. People in these conditions are less interested in becoming volunteer leaders aiding extension programs than they are in their day-to-day living.

Many factors motivate people to accept new ideas and practices. Here are some of them: [1]

Psychological factors

New experience
Recognition
Job security
More leisure time
Better life for children
Greater efficiency
Emergency needs

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[1] Communication in Extension as Developed for Western Nigeria - Western Nigeria Ministry of Agriculture and Natural Resources. pp 9-10

Sociological factors

- Higher social status
- Greater prestige
- Role expectancy
- Sociability
- Hobbies

Economic factors

- Education for children
- More consumer goods (for more comfort, also for more prestige)
- Better homes
- Higher level of living
- More earning power
- Better occupational efficiency

Satisfaction of learning

- One set of skills, when learned, will help motivate adults to tackle more difficult skills

The Diffusion Process

Diffusion is the process whereby information and improved practices spread from their originating sources to thousands of ultimate users and adopters. In the case of agriculture, it is the process by which new farm practices or ideas are communicated from sources of origin, usually scientists, to farmers.

A major difference between the diffusion process and the adoption process is that diffusion occurs between persons while adoption is an individual matter. An understanding of both processes is important to a change agent. 1/

United States farmers say they receive information from several main sources. These include friends and neighbors, government agencies (including extension workers), dealers and salesmen of farm supplies and mass media (newspapers, farm magazines, radio and television). These are findings from rural sociology studies. 2/

In these studies mass media rank highest in providing awareness and arousing interest in a new practice, closely followed by friends and neighbors. Government agencies rank third and dealers and salesmen fourth. At evaluation, trial and adoption stages, friends and neighbors rank first and government agencies second. The high ranking of friends and neighbors emphasizes the value of volunteer leaders in introducing a new practice. Remember, though, that mass media and friends and neighbors became aware of new facts somewhere. Their source most likely was the Experiment Station or Extension Service.

1/ North Central Regional Extension Publication no.13, Adopters of New Farm Ideas - Farm Foundation and Federal Extension Service Cooperating.

2/ Adopters of New Farm Ideas - North Central Regional Extension Publication no. 13, Farm Foundation and Federal Extension Service Cooperating. East Lansing, Michigan, USA, 1961.

The alert extension workers will make full use of all available channels to inform farmers and villagers

These findings on source of information hold true for U.S. with a communications-saturated society. Rural sociology research casts doubt as to how fully they apply to a developing nation with much less mass media. One study [1] in Mexico proposes that this generalization be tested: "Farmers first hear about new ideas through channels of communication most accessible to them and which include new ideas in their message." Also, other research will soon report diffusion studies in Brazil, Nigeria and India.

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[1] Myren, Delbert T. - Rural Communications Media as a Determinant of Diffusion of Information about Improved Farming Practices in Mexico. Paper read at Rural Sociological Society annual meeting, August, 1962, Washington D.C.
Dr. Myren is Information Specialist, Rockefeller Foundation Agricultural Programme, Mexico.

Extension services in each country may find it advantageous to make studies to determine where villagers learn about new practices, what arouses their interest, and what convinces them they should adopt specific changes.

The U.S. regional study shows also that all persons in an area do not adopt new practices immediately nor at the same time. Instead, practices spread gradually among families. This is true everywhere. Reactions of farmers were arranged in five categories according to time and speed of reaction. (Figure 7-3)

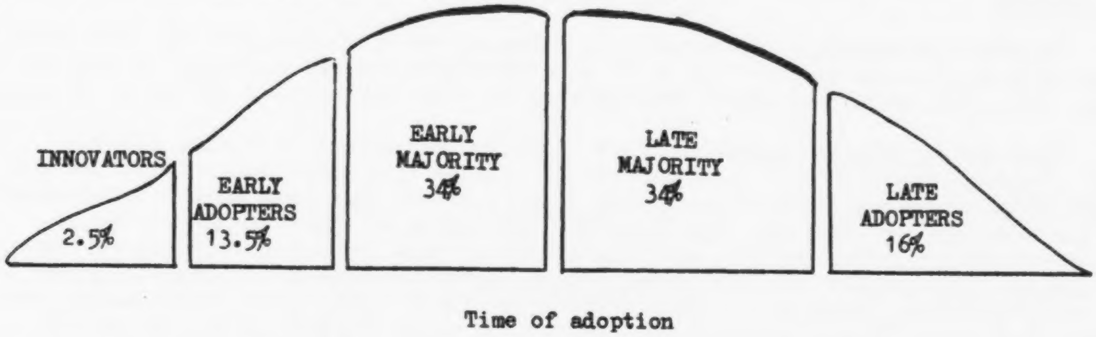

Figure 7- 3 Distribution of farmers among the five categories according to time of adoption. From "Adopters of New Farm Ideas"

Characteristics of Adopters

These were characteristics of the five group of adopters:

The Innovator is the first in his group or community to bring in or adopt a new idea or practice. Innovators are few, especially in societies bound by tradition. They have larger than average holdings, greater wealth, better education and a venturesome spirit. They are willing to experiment and risk failure on the chance of substantial personal gain.

The Early Adopter is quick to see the value of a new practice in his community and will try it if he feels it has a fair chance of success. He is usually younger than average, has higher education, is socially active and reads more than later adopters.

The Early Majority are of average age, experience and education, highly respected in their communities and adopt a practice only after they are convinced of its value.

The Late Majority make up a large block of farmers of the community. They are more conservative, are less wealthy and adopt a practice only when it is generally accepted by the community.

The Late Adopters are characterized by their conservatism, are older than average and seldom take any risks.

It behoves the extension worker to know his farmers and their attitudes toward change. This knowledge should be applied in planning programs to reach specific categories of farmers, in deciding which extension teaching methods to use at different stages of program development and in selecting and training leaders.

Studies have shown that the innovator especially may not be the best leader. He is too far advanced to enjoy the confidence of most farmers. Most often the early adopter is the natural community leader. People learn from demonstrations on his farm. This is more true in progressive communities and with younger people where quick acceptance is valued. In communities slower to change, the early majority, or even late majority adopters, often have more influence in diffusing new ideas, especially among older people.

Group Dynamics

Extension education is concerned with changing the knowledge, attitudes and practices of large numbers of rural people. But to do so effectively it must take into account not only the wants, desires and wishes of individuals, but also how they act and react as groups.

Each person chooses whether to adopt or reject a new idea or farming practice, but this choice is the result of interplay of many forces both within and outside the individual. His experience, education, traditions, mental capability and many other internal influences affect his decisions and choices. But there are many goals he cannot attain alone. Education for his children, medical services, improved roads, better markets, flood control and irrigation projects are a few examples. These require group action. The individual is also influenced in his decisions by the attitudes of others in his group or community, and he in turn influences them. In traditional societies this influence is so strong that few will act in opposition to the socially accepted standards of the group, even in their own personal activities.

Any mass education movement like extension must be carried largely through groups and their formal or informal leaders to the masses of rural people who are the final target. Group action programs not only multiply the effectiveness of professional extension workers, but are the only means to bring about large-scale change. Therefore, extension workers need at least some appreciation and understanding of group action processes.

According to Beal, Bohlen and Raudabaugh 1/, groups, like individuals, develop wants and desires, some of which they establish as goals. In their effort to achieve those goals they select certain techniques. They add, however, that while the individual chooses his goals and adopts techniques largely on his own decision, group choices are a product of many forces..... forces within individual members, between individual members and in response to external pressures.

Three basic parts of the group process are the group, goals and techniques. The group is made up of individual members, each different from every other member. Each has special interests, drives, motivations, expectations and hopes. He has definite values, attitudes, feelings, habits and beliefs. Each person also brings to the group certain negative forces such as his premonitions, fears and frustrations. He may also have ulterior motives such as personal gain or a desire to play a role in the group for which he may or may not be fitted.

Each person reacts individually, with each other and with the group as a whole. These lines of force are called internal dynamics of group behaviour. Other forces also operate on the group from outside. They make up external dynamics of group behavior. Every group is influenced by social pressures of the community as to what is acceptable and unacceptable. Other "outside" groups also exert pressures on group members. The community and other groups expect certain behavior from the group in question.

1/ Adapted from George M. Beal, Joe M. Bohlen and J. Neil Raudabaugh-Leadership and Dynamic Group Action, Iowa State University Press, Ames, Iowa, USA p. 39

Second, each group has goals, purposes or objectives. Otherwise it would not exist. Sometimes the goals are vague and only implied, but if a group is to be productive it must have specific goals adopted and understood by group members. In a democratic situation goals are chosen by the members as the result of dynamic internal and external influences.

Third, group technique is a predesigned pattern for human interaction, as compared with random behavior. An effective technique motivates and activates both internal and external dynamics so that the forces are better integrated and directed toward the goals of the group. Some better known techniques are discussions, forums, role-playing, dialogue, interviews and committee hearings.

The group, goals and techniques are all governed by the value system—things that members feel to be important. Values determine which persons form the group, what goals they adopt and what methods or techniques they use to attain their goals. People join groups for many different reasons. Some join to enhance their status; some for the opportunity to help others; some to escape boredom; and some because their friends and neighbors belong. Because of this variety of reasons for joining, you can understand why groups often find it hard to agree upon goals, objectives and methods of attaining their goals. To become a leader or productive group member, you must understand why people act as they do and try to bring about a common basis of agreement on goals and techniques.

Productive group action requires that members take part actively in adopting goals, deciding on techniques and in carrying out programs agreed upon. There are many blocks or obstacles to full participation. A group works actively for goals like his own, but a person may not know of this group. If he knows of it, he may disapprove of their means to attain their goals. He may feel insecure in the group, not fully accepted. He may feel inferior because of lower social status, lack of education or other reasons. He may not be sure of what the group expects of its members. Members need to examine themselves and try to cope with their blocks and frustrations as well as to understand these same problems of others.

Man continually tries to adjust to his obstacles. These are among his more common adjustments:

Aggression - strikes back blindly when his ideas are not accepted by the group.

Compensation - no longer takes part in discussions, but still helps in other ways.

Rationalization - denies to himself that he ever wanted the thing he had worked for. It was not important anyway.

Identification - Associates with others he considers more successful than himself.

Idealization - Over-evaluates his own attainment, ability, worth or importance. Considers his contribution more valuable than the group judges it.

Displacement - Blames someone else when the person he idealizes does not live up to his expectations.

Projection - Blames someone else for his own failures.

Conversion - Transfers energy into some physical symptom or complaint. Becomes ill when unsuccessful in his relations with others in the group.

Regression - Retreats from a complex problem to a simpler one. When dealing with large groups he may wish the group were smaller.

Negativism - Disagrees with all further proposals or alternatives.

Fantasy - Day dreaming. Imagines the situation were different.

Most adjustments are complex and any event may frustrate someone. Leaders may help group members understand their frustrations and the adjustments they make.

Adjustments may be useful as well as destructive. For example rationalization can be used as an escape from the reality of embarrassing social situations. If used intelligently, adjustment can help a person escape from blocks, thus allowing him to proceed with constructive activities.

Thus group formation and participation include individual motivation, blocks and adjustments. In this complex process a group of people with a wide variety of individual goals, values, skills and blocks to group participation mold themselves into a productive group. Each group is unique, but certain essentials must be present before a group will be formed. "If individuals are to be formed into a group, common interests must be established. There must emerge the belief that the group formed represents the potential of fulfilling those interests."

Internal Dynamics of Groups

Each individual brings his own characteristics of the group. These include his interests, abilities, desires and wishes as well as his blocks and frustrations and his adjustments to them. These forces contribute to the dynamics of the group. Certain other forces develop as a result of interaction between individuals. The summation, integration and resolution of all these forces have been labeled the internal dynamics of the group. Dynamics means the energies and forces derived both from individuals and from their interaction with each other, and the summation and resolution of these forces into active as opposed to static behavior.

Many forces combine to make up the internal dynamics of groups. Among them are:

Atmosphere - The prevailing mood, tone or feeling that permeates the group. Physical surroundings; friendly atmosphere or one of fear, suspicion; authoritarian leadership or shared leadership. Bother leaders and members are responsible for creating an atmosphere under which group members may work together best. All group members should have a basic belief in the value of the individual, sincere belief in the dignity of man and an honest respect for each man's point of view.

Communication Patterns - Many problems arise from inability of leaders or group members to communicate with other group members. Words, gestures and expressions are often misunderstood. In heterogeneous groups it is particularly important that each group member makes sure he is communicating with all other group members. The most productive groups have a more adequate communication network than those that are less productive.

Participation - This involves more than overt expression through speech or action. Attitudes, gestures and manners also enter in. How many members take part? What is the pattern? When one person speaks, is he followed by several others? Is the pattern leader centered or distributed throughout the group?

Individual and group participation are related to the opportunities provided for members to take part. Attending meetings, serving as officer or on committees, washing dishes and writing news stories are also participation. The more a member participates, the more favorable are his attitudes toward the group and the greater his feeling of concern for identity with the group. Those members who participate the most are those who understand the basic purposes and functions of the group, have clearly in mind the group's expectations of its members and feel secure in taking part as a member. They also feel satisfied from their participation.

Group Standards - This means the level of performance expected of group members. Standards include member conduct, participation in activities and successful work completion. Standards become the groups expectation of members and officers. Standards should be realistic and understood by all. Deviation is frowned upon and groups have ways to secure obedience. In most cases higher group standards are set when the entire group helps set them. Standards should be enforced consistently, not easily with one person and rigidly with another. In general, the closer the person comes to living up to all group standards, the higher will be his group status and his sense of satisfaction toward the group.

Social Controls - Every group secures conformity to expectations of its members through social controls. They include various rewards and recognition like election to office, certain status and friendly attitude of the group. Punishments include rejection by the group and taking away privileges. Social controls should apply equally to all, as much as possible. The effectiveness of controls upon members is directly related to the importance assigned by the member to maintaining membership and status in the group.

Identity or "We feeling" - Identity implies a common bond, a sympathy and a strong feeling of being united. Each member feels a common concern for what happens to other persons of the group, and to the group as a whole. Identity is largely emotional. It is important to know that a member may identify on one basis, but not another. He may agree with the fundamental purpose but not with the group as a whole, and vice-versa. People may identify with more than one group whose goals are in conflict. This may cause reduced participation.

General Role Definition - The general expectation of group members or sub-group's role within the group should be well-defined and understood by all.

Functional Roles of Group Members - Different group members may play many roles: initiator-contributor, information seeker, opinion giver, elaborator, summarizer, coordinator-interpreter, orienter, disagreer, evaluator, critic, procedural technician, recorder or others.

Group Building and Maintenance Roles - Some examples are harmonizer, compromiser, gate-keeper or expediter, standard-setter or ego ideal, group observer and communicator or follower.

Individual Roles - These are usually attempts by group members to satisfy individual needs irrelevant to the group. They include:

Aggressor- expresses disapproval of values, acts, feelings of others

Blocker - disagrees with every proposal

Recognition seeker - calls attention to himself

Self-confessor - expresses his personal feelings

Playboy - makes display of his lack of involvement

Dominator - tries to assert authority

Special interest pleader - cloaks his own prejudices in pleas for special groups.

Human Relations Skills - These refer to the ability to work with and get along with people. Persons in each group possess human relation skills, in varying degrees. The basic understandings and skills needed for good human relations can be learned and communicated.

Heterogeneity-Homogeneity (Difference-Likeness) - We need to recognize that all groups have some degree of heterogeneity. We need to learn to understand these differences and how they may be harmonized for greatest group productivity. We tend to group ourselves on the basis of similarities. However, within these relatively homogeneous groups there are many differences. Group members working together over time tend to become more alike in interest, objectives and satisfactions.

Group Size - Size is particularly important in deciding what group techniques to use under certain conditions to accomplish specific goals. Large size may limit the amount and quality of communication that can take place among individual group members. As size increases, groups show a greater tendency to adopt more formal procedures. And larger groups usually find it harder to coordinate group activities. Efficient size varies with the task, time available, maturity of the group or amount of follow-up action wanted. Experience shows that committees of 3, 4, 5 or 7 persons are more efficient, while discussion groups of 12 produce effective communication.

Group Evaluation - Evaluation is present in all groups. It may be systematic or accidental, conscious or unconscious. We evaluate three types of performance - our own, others and the group as a whole. We evaluate other groups and they evaluate us. Systematic, rational evaluation has great potential to lead each member and the entire group to greater productivity. Leaders who evaluate more thoroughly their own and their group's work are often rated most effective. It would seem highly desirable for groups to set up some formal methods so they can evaluate periodically group process as well as group progress.

The External Dynamics of Groups

External forces also affect all group activities. Among them are community values, community expectations, institutional values, parent group affiliations and control, intergroup competition, prestige and status. These external forces affect every group - its member motivation, goals, methods and on-going activities. These external forces are reflected largely through the beliefs, feelings and actions of members.

The community develops expectations of various groups. Certain groups with certain kinds of members are expected to perform specific functions for specific categories of people.

Expectations of a given group may be based upon tradition, past performance, social status of membership and leadership, publicly stated purposes and public image of the organization and its organizational affiliation. Forces may also originate from non-members, other groups or institutions in the community such as schools, churches or businesses. These external forces may be judged restrictive or expansive.

The Social Action Process

Certain essential steps have been identified as a guide for affecting change. 1/ Attention to these steps can greatly expedite the introduction and diffusion of new and improved practices in rural communities. They include:

1. Initiation
2. Legitimation
3. Diffusion
4. Organization and planning for action
5. Conducting the program
6. Evaluation

1/ Marlys Richert - A Study of Factors for Consideration in Membership Selection of County Extension Program Committees. Unpublished doctoral thesis, University of Wisconsin, U.S.A. 1957

Initiation consists of someone coming up with a new idea or improved practice he feels is useful. He is the initiator and may be the local extension worker, a specialist, a progressive farmer or almost anyone. The extension worker is a professional intiator of new and improved practices. He discusses his idea, problem about which something should be done, or improved practice with a few other people. Together they review and revise the idea and accept it as their own. Each of these people in turn discuss the idea with a few others each of whom may contribute further ideas on the problem.

Legitimation refers to getting approval of the idea by the power structure. The local extension worker may discuss it with a specialist or his supervisor, especially if additional resources are necessary to carry it out. But more important, he must discuss his idea with persons in the community who may affect acceptance or rejection of the idea by the masses of rural people. This discussion again may lead to revision of the idea and again the legitimizers may accept the revised idea as their own.

Once he gains approval of the power structure, the extension worker and the people with whom he has discussed the ideas, using the diffusion process encourage people of the community to take up the idea or practice. Again, discussion with influential people may result in some revision and adaptation to the situation. Support of influential persons in the social system is especially important at this stage.

Organization and Planning implies that a group of people be brought together to explore alternatives, determine objective and plan action. They will examine situational information, determine the scope of activity, and assign responsibility. Even in conducting the program adjustments in plans will occur. Evaluation upon completion points the way to required follow-up.

The director-general of agriculture in a Latin American country became enthused with the philosophy of extension education while attending an early FAO training center. Upon return to his country he resigned as director-general and arranged to be appointed national director of extension. He went to his home community and proceeded to develop an extension program including crop improvement demonstrations, youth clubs and community development projects. The program was so successful that the people arranged a fiesta to celebrate their accomplishments and to honor the extension director. The minister of agriculture was invited. He expected the people to give him the treatment befitting a dignitary and to then present their requests for help from the central government. Much to his surprise there was none of this. They showed him the products they had raised; children demonstrated what they had learned in the youth clubs, and expressed great appreciation to the director of extension.

The minister became alarmed. He returned to the capital and demanded the resignation of the director whom he thought was building himself up to take the minister's place.

The director had followed the steps in the social action process with one exception. He had not legitimized the program with the minister. Furthermore he had conducted the program in his own name rather than as a project of the ministry of agriculture.

Chapter 8.

CONDITIONS AFFECTING EXTENSION TEACHING

In Chapter 3, we discussed a number of factors to take into account in organizing an extension service. Many of these factors also affect the choice of methods to be used in extension education programs. Among the more important are the social structures in rural communities, rural leadership, economic factors and civic and community organization.

During the past two decades, most of the less developed countries have been trying to speed up their rates of economic development and social change, often with the help of international organizations and the more fortunate countries. This assistence has come in two forms - economics assistance in the form of loans and grants and technical assistance in the form of advisers in a variety of fields. Although such assistance was quite effective in Europe following World War II, results in developing countries of Asia, Africa and Latin America have not come up to expectations. Much of this disappointment can be attributed to differences in social structure between developing countries and the more advanced nations which provided much of the economic and technical assistance. Social factors often outweigh economic factors when a drastric change in production practice is involved. Egyptian villagers resisted the introduction of new high yielding wheat varieties because the straw was shorter, less useful in waving mats and there appeared to be less of it for use in feeding their animals. The attitude of Hindus toward cattle slaughter is a well known block to agricultural development in parts of India.

The attitude of individuals toward change and the influence on this attitude of the various groups in the social structure is perhaps the most important element for consideration by extension workers. A knowledge of the social structure of the community, the values of each group and class and methods of promoting group action are essential tools of the successful extension worker.

Social and Cultural Factors in Extension [1]

What people do by tradition is mainly determined by the organization of the society and its culture. Let us now consider some of the terms that we use when talking about people and their way of life.

Society. This is the term used to describe a group of people who have lived and worked together long enough to get themselves organized and to think of themselves as a social unit. Society has a structure, that is to say, a patterned arrangement of relationships between the people of that society.

The structure or organization of a society is the way in which the society is organised into families, clans, tribes, communities, clubs, etc. People change, they are born, grow up and die, but the organization remains.

Culture is what we call the way of life of the society, the way people behave. Culture is the product of people in a society or group; the ideas, attitudes, rules and habits which people evolve to help them in their conduct of life.

Progressive agriculture involves the farmer in making decisions for himself about which crops to grow, how to grow them, how best to use the land, labor and money. By persuading farmers to adopt progressive agricultural mothods, extension workers encourage farmers to make decisions for themselves on farming matters which have in the past been strongly influenced by the traditions and habits of the society.

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[1] D. J. Bradfield - Guide to Extension Training. FAO, Rome, Italy pp. 95 - 111.

For example, a farmer may arrange with neighbors to exchange his scattered gardens so as to consolidate them in one holding which he can farm more efficiently. He decides to have his holding farm-planned. He decides to grow more or different food and cash crops, to buy and use fertilizers and ox-plows, to move his horse and cattle sheds from the village to his holding. The farmer may have saved money which he had buried under the floor of his house. Maybe he was going to use it to buy more cattle, to pay lobola (bride payment) to enable his son to marry, to buy a bicycle, a maize mill or a lorry. He may now decide to spend some of it on improving his farming by buying plows, fertilizers, wire for fencing or possibly to pay labor to stump his farm. If he has not got enough money he may seek a loan to buy these things.

These are all steps toward progressive farming. They are changes from the traditional way of doing things, when the farmer merely did what his neighbors did. But the decisions he makes do not affect him alone. They also affect his family and the community in which he lives.

The farmer may want his sons to help him plow. His wife and daughters may have to learn to handle an unfamiliar crop. The whole family may have to work harder and in different ways to establish the farm.

Because he is changing from the accepted traditional pattern of farming and living, other villagers may be suspicious or even hostile. His decision to exchange gardens with neighbors disturbs the pattern of village gardens. The headman or whoever traditionally allocates land may oppose the changes. If the gardens were originally given to the farmer's wife, her family may be unhappy at the change. Above all, the changes represent a break with the traditional way of doing things and are a threat to the existing social relationships. Therefore members of the society who value the traditional ways above all else will be opposed to the farmer whose success is due to adopting progressive ways of farming. His success appears to them to threaten their influence over other village people.

The opposition may be too much for the farmer. He may value the goodwill of his neighbors too much to risk their disapproval. While wanting to change he fears the criticisms which will result from the change. He still wants to belong to village society and to keep the good opinion of his neighbors and relations. For this reason, the change from traditional to progressive agriculture is usually made gradually. When the family and community have seen the advantage of a new method they may be less opposed to the next step.

Because the farmer is making a break with tradition he wants to be sure that he is doing is sound and safe. He is exchanging the known results of traditional ways of farming for the unknown of the new methods. He may agree that the results of traditional ways of farming are not good enough but will the results of the new methods be any better? He wonders if he will be able to carry out the new methods, will they not be too difficult or too expensive for him? What will happen to himself and his family if the new methods fail or he is unable to carry them out? Who will help him if they fail and he has nothing to eat and no money? At least in the past the old ways gave him some money and some food and his family and neighbors would help him if he needed anything.

For these reasons the extension worker should:

1. Study the social organization and the culture of the people with whom he works.
2. Identity himself with their aims and ways of life.
3. Know their customs and traditions.

4. Understand the values of the society, that is, the things that people consider most important—and hereby gain the confidence of the people with whom he works so that they will be encouraged with his support to take the risks that change involves.

We will now consider briefly some of the principles of social structure and culture affecting extension work. This is far from being a complete study. The reference books and papers listed at the back of the book may be related to your own experience and those with whom you work.

Social Structure

It is important to understand the structure of the society with which one is working, to know who does what in the village and, in particular, to know who makes the decisions. Who are the people of real influence who deal with the allocation of land? Many mistakes have been made in extension work through lack of knowledge of village social structure or through ignoring its existence.

What are the factors causing the division of people into groups and societies?

Sex division. Traditionally some jobs are carried out by men and some by women. Each sex has customary duties in village life and agriculture. If you plan to introduce a new crop or a new extension approach which is likely to change existing customs then you must fully understand these customs before you can succesfully change them.

Religious and ceremonial groups. Members of certain religious groups have common loyalties and attitudes. "Gule Wamjulu" is an example of a ceremonial group which has very considerable influence among Chewa people in Malawi.

Division based on age. The society has respect for the experience and wisdom of elders, at least in matters of a traditional nature. People who have grown up together have common interests and experiences. Young people have different interests and attitudes from those of older people. These groups can be referred to as age groups: each group may differ from the others in attitudes, values and aims in life.

Grouping on the basis of common residence. This grouping can consist of (a) small units: family, homesteads or hamlets of a few houses grouped together and split off from the main village, and (b) village under a headman which may or may not comprise several hamlets. The fact of living close together forces people to cooperate and develop similar attitudes to common problems. If they fail to cooperate and disagree on common problems the group may split and factions separate to form a new homestead or hamlet.

Kinship groups. These are groups of closely related people. The basic family unit is father, mother and children, but this unit is made part of a larger group by bonds of blood and marriage. We are concerned with this larger unit which is known as a kinship group. The bonds which tend to make members conform to group behavior, attitudes and responsibilities are called kinship ties.

It is important to know the head of the group as he usually makes decisions binding on its members. Members of kinship groups have a traditional responsability to help each other. These responsibilities are at once a help and a hindrance to the group

By helping the aged, the sick and the unfortunate members of the group they seek to avoid or reduce the effects of serious misfortunes. For example, elder brothers help pay school fees for younger brothers or nephews, but in doing so may put themselves in a difficult financial position or may even go short of good food for themselves and their families in order to meet their responsibilities.

Systems of Succession and Inheritance

Matrilineal. Among many people of Malawi, for example, descent is matrilineal, that is, a man speaks of his home village as the place where his mother and mother's brothers were born. In chiefs' families it is typical to find the ancestors remembered for as long as thirteen generations on the mother's side but for only two on the father's side. Succession is also matrilineal. The office of chief usually passes to the oldest sister's sons and if there are no sons to the children of the sister's daughters.

Inheritance of possessions does not follow the same pattern. They are usually divided between the dead man's brothers and sisters and his wife. As it is usual for the women to own the land, there is no change in ownership until the wife dies. Then the land is divided among the children.

When a man marries he often goes to live in his wife's village. He may neglect his own children (by her) in favor of supporting his sister's children in his home village where he will take most of the money he earns. He knows that if his marriage breaks up he will leave his wife's village and go back to his home or marry into another village. He is unlikely to want to improve his wife's land and make it into a proper farm, because he feels that if his marriage breaks up he will lose the farm and the benefit of the improvements he has made on it. He also knows that his sister's children, whom he regards as more important to him than his own, cannot inherit that land. Under this system there is little incentive for a man to develop a proper farm. More effort might be made to teach women to become better farmers and improve their land.

Cattle are usually owned by the head of the family or kinship group in the name of the group, that is, they are a family possession. When the head of the group dies the next senior brother succeeds. If there are no brothers, or the brothers are not thought suitable by the family, the responsibilities of the head of the group may pass to the elder son of the dead man's sister, as with a chieftainship. Sometimes a chieftainship may pass to a brother if there is no nephew, or if the nephew is unsuitable. A very powerful brother may sometimes seize a chieftainship over the righful successor and persuade the society or group to accept him.

These systems are not static. Some people, particularly those of more advanced education, are beginning to reject matrilineal inheritance and insist that their own sons inherit. Such people usually ask for land, either from a headman of a village with land available or in a resettlement area, so that thay can build a farm and homestead which will pass to the wife and children on the death of the father.

The Government of Malawi has recently passed a law introduced by Dr. Banda, then Prime Minister, Kamuzu's Mbumba Protection Ordinance, which directly affects inheritance. The law seeks to protect wives and children from the operation of traditional patterns of inheritance which might result in the wife and children becoming destitute on the death of the husband, by reason of possessions and money being taken by the relatives of the deceased. This law affects only the inheritance of freehold or leasehold land, and does not affect the inheritance of land which continues to be governed by traditional law and custom. Succession to positions of family head, village head or chieftainship is similarly not affected by this law

The traditional inheritance systems of an area should be known to extension workers. Although the new law supersedes some of them, it is inevitable that in certain cases the relatives of the deceased try to apply the traditional system, thus leading to disputes which may affect extension work.

Patrilineal Ngoni people follow this system, descent, succession and inheritance being through the father's side of the family. Inheritance is passed from father to son. Following past conquest the Ngoni imposed this system on the Tumbuka and some Chewa people with whom the Ngoni intermarried, but most people in Malawi follow matrilineal systems.

These systems of inheritance and succession may seem complicated to the new extension worker unfamiliar with an area to which he has recently been posted. The system operating with the various families and groups in his area should, however, be known to him. In some districts people of different ethnic groups may be intermingled. It is necessary to understand the differences in these aspects of their social structure and culture in order to be able to work successfully with all of them. If the extension program ignores the facts of succession and inheritance in the personal relationships of the people their confidence will not be gained and there will be great difficulty in carrying out the program.

Other groupings. There are, of course, many other types of groupings. For example, cattle owners in a society will have certain interests in common on matters affecting their cattle.

The Culture of a Society

We have seen that the culture of a society is the way in which people live, their customs, traditions, methods of cultivation and so on. The culture of a society is learned by each individual member of the society. Children are not born with knowledge of the culture of the society; they learn by seeing how older children and adults behave. Later, older members of their family or kinship group teach them about the customs and traditions of the group and the society. Later still, they may be initiated more fully into the society at ceremonies where they are taught by older pople traditional habits and customs and their role in the society. As the individual grows older, experience helps him to understand more fully the behavior pattern of his society and may also teach him how he can replace some of the traditional forms of behavier with new patterns.

Culture is not an accidental collection of customs and habit. It has been evolved by the people to help them in their conduct of life. Each aspect of the culture of a society has a definitive purpose and function, and is therefore related to all the other aspects of its culture. This is important to remember when planning extension programs. Changes in one aspect of culture may have an effect on other aspects of that culture. If changes in one aspect of culture are introduced, and these are likely to have an unacceptable effect on other aspects, then a program has little chance of success. This is one reason why local leaders and farm people should help in planning the program. They will know whether or not the changes proposed will be acceptable to the society.

People think that the techniques and methods of cultivation practiced by their society are ideal. This is a problem weface when teaching improved methods of growing maize in Malawa, for example. Few people willingly accept advice on better methods of growing maize as they regard this as a traditional crop, and the methods they use as being right because they are customary. They have always grown maize this way, why change?

For similar reasons, it is not easy to teach better methods of poultry-keeping to village people who have kept chickens in the traditional way. It is also interesting to note that it is easier to teach more advanced systems of livestock husbandry such as stall-feeding to those who have not previously owned cattle than to those who have.

Cultures Change. Cultures are never completely static; they can and do change. The speed at which change takes place depends largely on the contact people have with other cultures and new ideas and the ability of individuals within the society to initiate and accept change. The extension worker's task can be described as helping to speed up the culture change in terms of better farming methods.

In time, new ideas or methods, once they are accepted by the society, gradually come to be regarded as customary. In most parts of Malawi the traditional way of agriculture was to interplant maize with beans and other crops on mounds (matutu). But now many people have grown crops in pure stand and on ridges for so long that they have almost forgotten the old way. Growing crops in the new way has become customary and so is absorbed into the culture and traditions of the society.

When cash crops such as Turkish tobacco are introduced, they are usually right outside the experience and therefore the customs of the society. There is no traditional way of growing these new crops. If people are willing to accept the idea of growing a new crop they are willing to learn the new practices associated with it. After some years they become accustomed to the crop and methods of growing it and these methods become part of the society's culture.

Because the crop has become part of the traditional way of doing things, it becomes less easy to introduce improvements in methods of cultivation. Therefore extension workers introducing a new crop should aim from the start to teach the most advanced methods practicable of growing the crop. It may become more difficult later on to improve when people have become accustomed to the crop. "We have grown it successfully this way in the past—why should we change?" they may say.

Turkish tobacco was introduced in the Mzimba district of Malawi as a new cash crop in 1956. Farmers who agreed to try out the new crop had no tobacco-growing tradition or experience to guide them. They relied completely on extension personnel to teach them. Thus they accepted the need to use fertilizer on seedbeds and in the field. Contrast this with the situation of village growers of other tobaccos, such as the dark-fired type. Because people have become accustomed to growing tobacco over 30 years without fertilizer it has been difficult to persuade them to use it. However, recent intensive and widespread demonstration programs showing the benefit of using fertilizer have now resulted in a much greater demand.

However, although it was easier to teach advanced methods when introducing this crop, it was not easy to persuade people to grow Turkish tobacco. Until very recently comparatively few people in Mzimba and elsewhere were growing this crop, although many have seen that other farmers have made a lot of money from it. The reason may well be that people feared that growing Turkish tobacco would affect their lives in ways which they were not prepared to accept. The farmer and his family have to learn new skills. The crop competes for his time and labor at a season when he is busy with other crops. He may fear that if he spends a lot of time growing Turkish tobacco he will be unable to produce sufficient quantities of food for himself and his family. Again, there is increasing interest in this crop and farmers are now convinced that it is worthwhile to grow. We can draw the conclusion that while there may be resistance to change, carefully planned extension work can overcome resistance to a new crop or farming method.

Factors Promoting Change

We should understand that there are many factors promoting change and make use of this knowledge in planning extension work.

Innovators - In every society there are some individuals who are more ready than others to accept new ways of life. They have a certain influence on their society but it is slight: in fact, if change depended only upon these people the pace might be slow. People in traditional societies are often suspicious and jealous of those who are eager to change.

However, as the society comes to accept the idea of change the innovator may cease to be regarded with suspicion and gain a growing influence. In fact, social change is often led by a few unusual and outstanding individuals.

Contact with other cultures - Contact with other societies is an important force for culture change. For example, in the past trade contacts between Malawi and Arabs introduced woven cloth to the country and Islam to the Yao people. The "balowoka" who crossed the lake from Tanganyika introduced iron-smelting and iron hoes to the Tumbuka people. The more contact there is with other societies the greater is the rate of culture change. Extension workers are introducing new, scientific ways of farming evolved in technologically advanced societies. Everyone who leaves his own society to travel for study or to work among people of another society brings back ideas which may change his own way of life and be adopted by other people in his society. The more people in a society are exposed to new ideas the more likely it is that change may be accepted by the society as a whole.

Communications - Roads bring changes to a rural society. Travel is easier and more people can visit other places and learn about more progressive ways of doing things. Traders establish shops and the goods in them may act as incentives to induce people to produce more from their farms in order to buy these new things. The provision of roads in rural areas has been proved to have a profound effect on rural societies, accelerating the rate of economic and social progress.

Newspapers and radio also bring rural people in remote parts into contact with the outside world. People in rural communities who have radio sets or who read newspapers are usually influential and can spread to their neighbors the knowledge or ideas they gain.

Other factors - Many other factors which promote change have been mentioned in the previous chapter. Education may also be a means of exposing the youth of one society to the ideas, values and way of life of another. Political and economic factors may promote change. For instance, the society may want new or improved schools because of the value people set on education to secure a better way of life for their children. The district council may decide to levy an education rate or tax to raise funds to provide the improvements the people want. Thus the individual member of the society has to find extra money for these improvements. This again is a factor which will tend to promote change, for people will need to earn more in order to pay more for what they want.

Usually new methods which can give the farmer a quick economic return are more likely to be accepted than those where he will have to wait for a long time to see the benefit. They are also more likely to be accepted than ideas which are good but do not appear to result in the farmer earning money. Vegetables are good to eat and help to improve the farm family's health. But few farmers will grow them unless they can make money by selling them. However, in time, they may try eating the vegetables they fail to sell and gradually they may become accustomed to growing them for food as well as for sale.

Extension and other rural development work - Extension workers and personnel of other rural development organizations are agents of change, bringing new ideas to the community, as we have seen in the previous chapter.

Agricultural extension, therefore, as one of the many factors promoting change, seeks to accelerate the pace of change and to guide it in ways that are agriculturally, socially and economically sound, and culturally acceptable to the people.

Barriers to Change

Culture-based barriers

Tradition - Most rural societies look upon new methods with indifference and sometimes with suspicion. Respect for elders often results in the attitude that the old ways are best. People fear the unknown and untried, they also fear to incur criticism for doing something different from the rest of the society. The motive of extension workers and others seeking to promote change is often misunderstood. Village people may think that the extension worker is introducing changes to benefit himself.

Belief in their own culture - Members of all societies believe that their way of life is best. "These new methods of farming may be all right for other people but they are no good for us." This attitude results in people being reluctant to try something new. "How can it be better than our way?" We know what is best for us."

Pride and dignity - People may be too proud to practice ways of farming that may result in others looking down on them. For example, they may be too proud to carry cattle manure to the fields. Many young people leaving school look down on farming although some successful farmers earn more than most government employees and school teachers.

Relative values - Certain improved varieties of maize have been shown to yield much better than local maize. However, some have not been used by farmers because they do not keep so well in store (nkhokwe) or the color or taste of nsima made from them is not acceptable. Rural people may value taste, appearance or some other factors more than the yield or cash return of a different variety of a crop.

Unforeseen difficulties . In the northern region of Malwi early rotations recommended to farmers did not include millet. Farmers wanted to grow millet to make beer and so fulfill social obligations; hence progressive planned farming did not begin to be accepted on any scale until less rigid methods were devised. In the Lunzu/Lirangwe (Kuntaja) land use scheme, the rotations were devised to increase econcmic crop production and it was assumed that villagers wanted to be successful farmers. Many of the men worked by day in Blantyre and preferred certain aspects of town life to village life. They retained their village gardens merely to produce maize, which could be grown easily by their wives, as a form of social insurance against possible unemployment and to provide a cheap food supply. However, the methods recommended meant that the men would have to work more on the land and it is thought that they resented the inroads into their limited leisure time and the inferred aim to wean them back from town to village life.

Extension programs aiming to introduce new methods should take into account the effect on the whole society and its culture and not merely the technical result of the methods recommended.

Customary body positions - People in the north of Malwi use longhandled hoes and work nearly upright whereas those in the center and south use short-handled hoes and bend to work with them. New methods or tools may require differente body positions. The need to learn new positions may slow down acceptance of the new ideas.

Social Barriers to Change

Responsibilities of the individual - Individuals within a society or a kinship group have responsibilities which they are expected to carry out. People who avoid such responsibilities anger other members of the society. A man may find that as his income increases so his obligations to his society or family increase. The more money he earns, the more help his kinsmen will expect from him. This can be a very serious barrier to change if the individual sees little advantage in improving his position when he does not benefit much from the improvement himself. However, he may overcome this by concealing his wealth, by distributing his cattle among friends to look after, by burying money or banking it so that he can tell his kinsmen that he has no money to help them. This may result in a farmer being reluctant to carry out visible improvements to his farm such as fencing, buying farm implements and other things which would indicate to his kinsmen that he is wealthier than he says.

Traditional ceremonies - Ceremonies such as weddings, funerals and enthronement of chiefs can take up so much of the farmer's time that he is unable to work his farm to the maximum efficiency. He is, therefore, unlikely to adopt new methods which, while they might increase his income, mean that he has to devote more time to working his farm, and less time to ceremonial social obligations.

Social structure - Extension workers should understand the structure of the society with which they work so as to be able to recognize and use the influential people who are most likely to be able to persuade the society to accept change.

A village may split into two or more factions because of quarrels between family heads. When working with these factions it is necessary not to favor one or the other. If a new idea is accepted by one faction it may be rejected by the other simply because the first has accepted it. Always find out who is an authority in a village. It may be one individual or a number of people. Sometimes a whole family may participate in making village or group decisions. Elected officials, chiefs or headmen, are not necessarily the only leaders or people of most influence. It is necessary to recognize and work through such official leaders but there may be other people who have no official positions yet who have an influence within the group and who should be consulted.

Progress in agriculture usually necessitates persuading individual farmers to try out new methods. But individuals like to associate themselves with a group; they feel safer with other people who have common interests or some other link with them. We recognize this fact when giving a demonstration or holding a meeting for a group of farmers who are interested in the new methods we offer. After the meeting the farmer returns to his family and the group of people who live in the same hamlet or village. While he may agree at the meeting that the new method is a good idea, he may find difficulty in persuading the other members of his family group that the changes he wants to make are in the best interests of that group. Because this group is the one that he has to live with day by day their opposition may very well outweigh the personal advantages to him of trying out the new methods.

Sometimes, however, the farmer may agree at the meeting or demonstration that a certain method is good because he wishes to conform with other members of that group in their acceptance of the new idea. He may be relectant or embarrassed to admit that he does not understand the new idea or to admit that it is good when he is part of this group. If it is important to the success of the extension program that the particular farmer be convinced, it will be necessary to follow up the demonstration or meeting with an individual visit to the farmer concerned and to discuss the new idea in relation to his own farm and the problems he sees in trying to apply this new method.

Psychological Barriers to Change

Attitude toward government personnel - People sometimes regard government personnel as tax collectors or policemen. Extension workers should not be involved in the collection of money for taxes or repayments of loans, or with prosecuting people. The extension worker's job is to teach people about better farming and better living, and such regulatory unpopular tasks will reduce his effectiveness as a teacher.

Attitude toward gifts - People often think of gifts as things of little or no value, otherwise why would anyone give them away? They may think that a gift is given with the purpose of gaining something in return. Many people in the past were suspicious of the bonuses paid to master farmers who had their farms planned and followed the recommendations of agricultural personnel. "Why should the Department of Agriculture pay people for farming in a certain way?" they would ask. "Surely it must be because they want to take the land from these farmers."

If you are trying to introduce the idea of a farmer's club in your area it is better if the club building is built by the farmers themselves rather than by government people using government money. Such a building is more valued by the people and they look upon it as their own. Many expensive social centers have been built in African countries and elsewhere which the people do not value as much as a simple building they have put up themselves. If they do not value the building or the project as their own, they will not be interested in it or support it.

When tree seedlings or plants are sold at a small charge they will often be better cared for than if they are given away free.

When planning extension programs or activities which involve the possibility of people regarding assistance unfavorably, discuss plans with local leaders in advance to obtain their opinion.

Communications Problems

Language - When teaching better farming methods in villages, simple language should be used and terms employed that the local village people understand and use themselves.

Pictures - Very often sophisticated visual aids are not easily undestood by village people. Films, slides and symbols on handouts or posters can be confusing to people who are not accustomed to them. Village people who are not accustomed to learning from films may not see a continuing, logical story in a film, but only a succession of odd scenes. When visual aids are used they should be explained and related to local experience common to the people in the group.

Learning problems - A method which is simple for the teacher who has mastered it may be very difficult for the learner even to begin to understand. We should be aware of the limitations of experience of the people whom we are trying to teach, and then plan our teaching programs accordingly.

Often new ideas and methods are taught by people who have not completely mastered them. The learner will soon find out that the teacher does not know his subject and will lose confidence in him. When planning to teach some new farming method, the subject matter should be reviewed in detail so that it is fully understood.

If difficulty is experienced in communicating some idea to the society, it may be because the nature of the society, its way of life, and the differences in experience between members of the society and the extension worker are not fully recognized. When planning extension work, therefore, it is essential to give as much attention to the human factors involved as to the technical aspects of the program.

Civic Structure

Civic structure, as used here, alludes to the official governmental organization from the central government down to the village or township. As previously mentioned under Central Authority, an extension worker cannot afford to ignore people in authority at any level. Whether elected through democratic processes or appointed by higher authority, they constitute a powerful influence for or against the adoption of innovations. The wise extension worker will endeavor to secure their support, or at least their acquiescence in the early stages of the introduction of a new practice.

But the extension worker must be conscious of another factor related to the political or civil structure. Extension education, as practiced in the economically advanced countries, is based upon the concept of democratic action and accomplishes its goals largely through self help. It originated in countries having highly developed local self-governments. Rural people traditionally elected their own local officials, levied local taxes to finance local institutions, such as schools, and settled their differences in courts presided over by judges elected by the people themselves. Local organizations carried on programs of community improvement including the establishment of libraries, hospitals, churches and other institutions.

Rural people in many of the developing countries have neither the experience in democratic processes nor a civic structure enabling them to develop, finance and carry out improvement programs independent of contral authority. Thus, the philosophy of extension is a new concept requiring the adoption of new values and the use of new social skills on the part of the villagers. In other words, the whole extension education concept is an innovation requiring changes in knowledge, skills and attitudes. These changes may be slow and difficult to accomplish and require patience and understanding on the part of the change agent.

However, in spite of the problems involved, extension education provides a very useful technique in training villagers to accept responsibility for their own welfare and gain experience in the democratic processes which the governments of many newly developing countries are attempting to introduce. Local leaders trained and experienced through extension programs can later provide essential civic and political leadership.

Identifying and Enlisting Leaders in Education and Action Programs 1/

Many occasions arise during the course of a year when extension agents and other professional workers are called upon to name or help select persons to serve on committees, attend educational conferences or meetings, or to help in some other way with this or that program. When to invite and how to gain one's acceptance and further involvement are challenging questions indeed. Probably you have faced such questions with varying degrees of success.

1/ E.J. Niederfrank - Identifying and Enlisting Leaders in Education and Development Programs, RDPA-9 (1/66), Federal Extension Service, U.S. Department of Agriculture.

Our purpose here is to present a few ideas that might help you to do so easier and with more effective results. A variety of studies and writings on leadership and social organization in recent years provide helpful leads. First of all, it is essential to consider the nature of leadership itself.

Appreciate What Leadership Is

Leadership, in essence, is simply influencing the attitudes and actions of one or more persons, leading toward the achievement of some purpose or goal. This is generally accomplished through various ways. For example, imparting knowledge, giving advice or suggestions, expressing a belief or opinion, making decisions on behalf of groups, providing assistance, exercising power, lending approval or support, also by example or demonstration.

Most leadership positions call for some degree of decision making, may call for knowledge and skills about particular programs and group operations; some call for power or even authority. All leadership positions require having a real concern for others on the part of the leader, consciously or unconsciously, if one is to really function as a truly effective leader; otherwise, one would not have followers. For leadership requires followership, based upon service to and support from people.

Most important of all, leadership is more than having been born with favorable characteristics, such as appearance, voice, personality and ambition. These characteristics may aid a person in developing leadership ability, but this ability is acquired as a result of training and experience rather than as a result of being born with certain attributes. If people have the desire to lead they can learn to be leaders. Some will not be as effective as others, even after considerable effort.

Leadership generally arises out of social situations of some kind that happen to call for particular leadership at given times for specific purposes, sometimes even crises; it arises out of the need for leadership. It is usually based upon some degree of previous accomplishment in the eyes of the group or one's followers who grant leadership or acquiesce to one's assuming it.

Thus, leadership reflects a relationship between people or between a person and group members. It is something earned. It is bestowed for, without having been given permission or support by the people concerned, it does not exist. A leader is only one who has followers or influence among people, based upon their judgement about his accomplishment, nature and potentiality, and the needs of the particular leadership job at hand. For a person to merely think he is a leader is not enough. Nor is it enough for a professional worker to think a person is a leader without adequately considering whether or not he has any followers or leadership relationship with the group or people under concern.

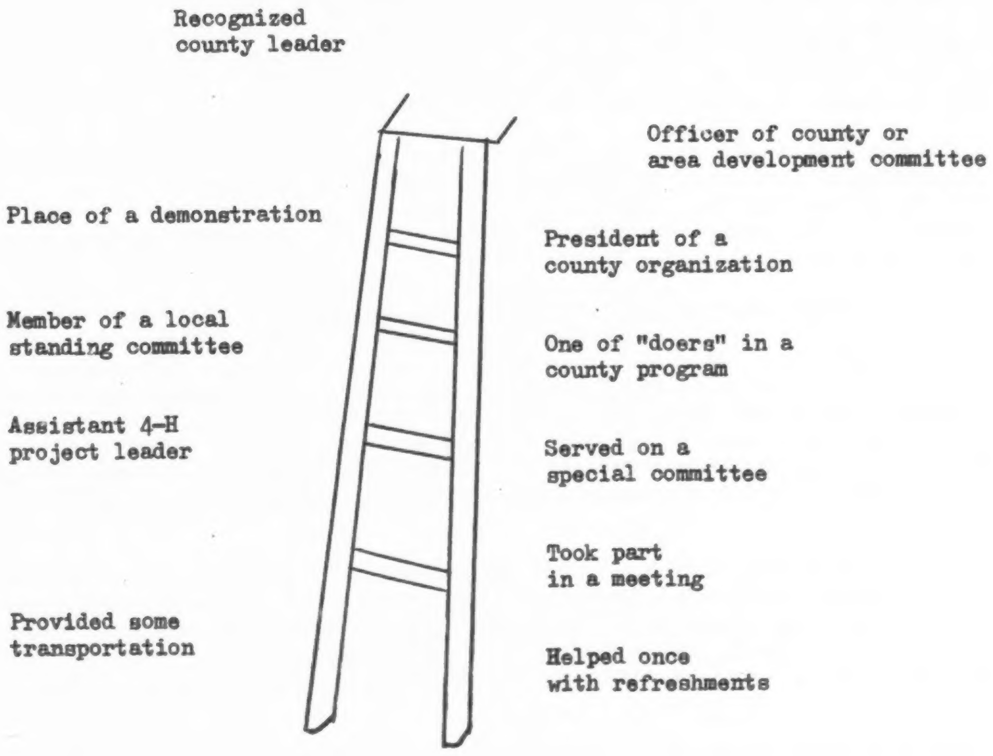
Leadership distribution follows relationships. Research bears out that leaders are generally rather widely distributed and vary in scope of influence according to the group relationships and concerns of the people in given social situations. Communities themselves, large or small, are networks of relationships or social systems. Within these systems various types and patterns of leadership usually function and can be identified.

People of given population segments,or social systems generally, are best reached through leadership of their own people. However, in many cases, their interest in a given subject and your rapport with them may first have to be developed.

Leadership development is increase in the involvement of people, increase in their ability to carry out responsibilities or otherwise function in given leadership roles, and increase in their own personal growth as a result of their greater participation or involvement. Always the factor of maturity and growth must be considered by professional workers as they work with people in programs. Very few leaders start out at the top of the ladder. People grow in leadership through experience and training. One form of growth is advancement in kind of positions held.

A good technique of leadership development is to provide opportunities for people to serve at the bottom of the ladder in beginning ways or as help on special occasions; in other words, to start them up the ladder and see to it that they are given recognition and encouragement. They become a reservoir from which to draw when filling other positions later. Keep rosters of people who have been involved in programs to help you think of names when such needs arise.

LEADERSHIP DEVELOPMENT IS GROWTH


Recognized county leader
Officer of county or area development committee
Place of a demonstration
President of a county organization
Member of a local standing committee
One of "doers" in a county program
Assistant 4-H project leader
Served on a special committee
Took part in a meeting
Provided some transportation
Helped once with refreshments

Growth in kinds of activity or roles of the individual as one moves up the ladder.

Figure 8-1

Leaders also grow in their ability to do better in given leadership positions; not all need to be "promoted" for development to take place. People grow in personality development, too, as they have opportunities to function as leaders. Besides performing a particular task or leadership function, one gains in knowledge, interest, aspiration and satisfaction.

Thus, leadership development, made possible through expanding opportunities to become involved, is truly human resource development.

Frequently it is best to avoid referring to persons as "leaders", or of using the term "leadership" when working with given persons or groups. One reason for this is that most good leaders prefer to be humble and not known by such a weighty title. For many, the term implies something they do not think they are or want to be; they prefer to be known by the particular position they are in at a given time, such as president, secretary, committee man or counsellor, rather than as a "leader", a term which to them tends to imply too much "front", "authoritative" or "top" position.

Another reason why professional workers should avoid over-use of the term "leader" and "leadership" is that such terms may weaken the relationship between a leader and his group, which gives rise to his leadership in the first place. People generally do not think of Mr. Blank as a "leader", but only as an officer, active participant, or as a person whose opinions they respect.

Think about Levels and Types of Leadership

First let us point up what may be called "levels of leadership", as suggested by the work of John Mitchell of Ohio State Extension Service. Research indicates that these levels tend or may be expected to be found in almost every local community, certainly every county. Generally, they are also found even within an organization, especially large ones.

The term "power structure" represents people who have influence, plus decision-making position, plus authority to carry out decisions.

But it is especially helpful in leadership recruitment and later involvement to think of more specific types of leadership than these levels - types classified on the basis of ways in which one provides influence or functions as a leader. This encourages recruitment in relation to given position or role, for different roles and responsibilities have different requirements or call for different types of leadership.

Here are several general types of leadership, classified according to general function and role or form of action: (1) participating positional leadership, which would include the positions of leadership in organizations, public and private, common in our society; (2) community leadership, which is influence of community-wide extent relevant to community-wide concerns; (3) informal, indirect leadership that one may exercise "behind the scenes"; and (4) the counsellor-adviser type of leadership, in which a leader is not of the group but helping it as a volunteer. Close to this might be paid sub-professional aid working with low income families.

These general types are elaborated and subdivided into more specific and commonly understood types below. Any given person may be serving in one, two or several of these capacities or roles at the same time.

Organizational leadership - This refers to the official positions in organization-the duties of the president, secretary, committee men, and the like. Many people are found today in positions of such leadership, especially in view of our increasingly more complex community life. Not all persons can readily serve in organizational leadership positions, but usually more can than do. Adequate training and assistance should be provided for such leaders.

Subject leadership is also a common type in extension education. It refers to providing or teaching given subject matter, or where one is asked to help in a given program because of the particular knowledge or skills that he has to offer. For example, the person who is asked to serve as a 4-H livestock project leader or a camp crafts leader, or a song leader in an organization, or the chairman of the audit committee, or the person who is asked to present a special lesson or study before a home extension unit or civic organization - each is asked because of some special knowledge or skill that he can contribute.

Action leadership refers to heading up or helping with work relating to the implementation of a given activity, project, or group action for getting some specific goal accomplished. Sometimes these people are known as "doers", "workers", or "action" leaders, because they are willing to help with specific tasks but may not care to be in organizational or subject teaching positions.

Opinion leadership. This refers to the judgment that one exercises about given subjects, programs, ideas or points of view. Persons having such leadership generally have a lot to do with molding local projects or programs. Opinion leadership generally comes from persons whose opinions or judgment is well regarded by at least some part of the local population. One exercising such leadership also may be an officer holder in some organization or a teaching leader in some program, but not necessarily, or perhaps not in the area for which he is exercising opinion leadership.

Legitimation leadership is found in every community and it is a very important role. It refers to the approval given by relevant power structure in relation to given specific proposals.

Persons from among local government officials, bankers, businessmen, persons of relative wealth, and clergymen generally lend legitimation leadership. A subject leader also may provide legitimation leadership in regard to certain specifics of a given proposal. Newspaper editors are opinion leaders but often also provide general legitimation leadership.

It is safe to say that every community, large or small, has one or more persons in it with whom certain program proposals should be checked before going too far too soon. Often it is this approval or disapproval that will cause a project to succeed or fail from the start. Such leaders are found in county and regional communities in regard to concerns of area significance, while other legitimation leaders occupy a similar position in primarily the local community, neighborhood or town for matters of these scopes.

Initiating leadership, the beginning of ideas. In almost every group or community are one or more persons known to be the "idea" people, the ones who come up with proposals for new policies, programs, or solutions to particular problems. While in other cases the initiating leadership may seem to be a product of the group itself. In any event the initiating leadership generally becomes involved in group action of some kind, affirmative or negative.

Decision leadership is self-explanatory. Decision making is a crucial process, for at many points in the course of the social action of a given project, a decision about something has to be made, usually either by an official, some delegated leader, or by group vote. But generally the supporting opinion and legitimation already should have been developed by the time this point is reached in the decision making.

Persons in various leadership roles are involved in making decisions all along the way; they are the ones who pound out final answers and give their aye or nay to matters under consideration. Decision makers in this sense frequently are found in organizational and public official positions, where making decisions is part of the responsibilities of their offices.

Decision making is closely related to opinion leadership and legitimation but is not exactly the same as these. Each tends to also contain a certain degree of power; that is, persons possessing or functioning in opinion and legitimation leadership roles may possess decision making position and power authority related to the decisions.

Public official leadership refers to governmental office holders. These especially have certain responsibilities to the community. They have influence and power, bestowed by the community.

Local governmental leaders generally do not initiate new policies or programs but follow the people - they consider and accept or reject proposals which other leadership advocates. This is why the other forms of citizen leadership mentioned, some of which may be found in development committees, planning commissions and civic organizations, are so very important; for here is often where the initiation, legitimation and early organization of needed projects takes place, which constitute the essential early steps in community development.

Advisory or counselor leadership is the assistance provided by a person outside the immediate group as an advisor. For examples, the 4-H club adult leaders or the church youth group counselors. Advisory or counselor leaders often may have certain knowledge or interests and be teaching such subject matter, but their specific role is that of providing advice, suggestions, and indirect leadership, to individual members and to the group rather than that of the above types; this is the uniquenese of the counselor type of leadership.

Concentrated vs. dispersed leadership - Frequently the same people are providing most of these different types of leadership, at different points or stages in given social action.

In fact, these different leadership functions or roles also may be found being performed by one person, or by two or more persons; or it may be centered in a family, or in an organization which locally may "head" the power structure of the community. Undoubtedly you may be able to name one or more communities where the "power structure" leadership - the opinion, legitimation and decision making roles - tend to center in one or two persons who were perhaps in official positions, or in one or two families, or perhaps in some organization or group.

Not infrequently cases also arise where decisions greatly affecting the community perhaps are made by someone living outside the local community in the county seat town or larger city where may be located the headquarters of a company which operates some local industry.

General vs. specialized leadership - Used in a general sense, "decision maker" and "power structure" tend to refer to community-wide or general leadership, and embody opinion leadership as well as the final decision making in some given projects or social actions.

Mention already has been made of: (1) special-interest leadership, and (2) community or general leadership. Some persons may be found in both, but there is question as to whether a person deeply concerned with some special interest can generally lend effective leadership to community-wide concerns; this seems to take a different type of person - one who has a total community viewpoint and welfare of the people at heart.

General community-wide or overall leadership is in contrast to special interest or specific subject leadership, such as being a leader in the agricultural or business or recreation or educational and welfare phase of community life. Even within these there may be specialized leadership.

Recent researches by rural sociologists tend to show that in small communities, a more or less "general" community leadership does exist and can be quite easily identified, but that as size of community increases in the studies, the leadership or power structure tends to become more diffuse and it is difficult to identify the general community leader or leaders, indeed if there are any. It is important then, to be concerned with specialized leadership, but always having the role of general community leadership in mind. It may be found sometimes residing in the public official leadership or in the local newspaper.

In view of all this, the selection of leadership to involve in area or regional program developments becomes a crucial matter which in most cases deserves careful thought before proceeding. However, area leaders have been successfully identified using the same "reputational" technique for identifying local community leadership, which is described later.

Persons known by others as community leaders generally are also known as thinkers, analysts and people of good judgment. A community leader is not necessarily an innovator, nor is he usually the best farmer or other careersman. The foremost criterion is influence - followership.

Plenty of evidence exists which indicates that social groups do have their influential leaders within them. This is true of all types of communities and levels of living or population segments. However, in many cases much of such leadership may be quite informally expressed or exercised and is often found in neighbor groups. Studies of visiting patterns and of who persons go to see for given kinds of help have highlighted such leadership.

The concepts "decision maker" and "power structure" have become increasingly popular in some social science circles during recent years. Power is an element of leadership functioning in many cases, but power is not by any means the whole of leadership. Simple influence and devoted assistance to given programs or ideas because of personal concern for given goals or compassion for human or community welfare, are also main components of the leadership influence exerted by many people to whom we refer as "leaders".

In this section we have tried to analyze "leadership" by breaking it down into several types according to basic function or process, in order to give a bit clearer description of all the leadership that comes to play in a community.

Have Purpose and Requirements in Mind

All of the above types of leadership emphasize the need for giving thought in recruitment to the responsibilities and expectation of given involvement or leaders wanted, then to the kinds of persons who can provide the types of leadership needed. A key question always must be: For what purpose are you wanting to recruit leaders or to help communities recruit leaders? Some suggestions are briefly mentioned for a few examples of leaders generally recruited in extension-related programs.

For public affairs workshops - generally invite thinkers; persons who can lend objective analysis above special interests; persons who can lend opinion, decision, and legitimation leadership; persons who would fall into the classification of "community or general" leadership. Don't invite organization officials simply because they are in such positions. Don't invite persons simply because they can spare the time to attend a district workshop and will give you a carload to go. Keep purpose in mind, the kind of followup that you want from them.

For 4-H adult leaders - Here the leadership function is primarily of the counsel-type, and involves a number of specific responsibilities. 4-H adult leaders must have specific knowledge or skills; also like to work with young people and have patience. Encourage leader recruitment by club members and parents themselves; make local 4-H work a community responsibility, not just "extension's program". Do not invite a person to be a 4-H organization or project leader simply because he is a general community leader or mainly provides opinion and legitimation leadership; and certainly not because he or she is the best livestock farmer or cake-maker.

Especially avoid selecting leaders on the basis that "the busy people make the best leaders". This simply compounds the leadership development problem; it puts too much emphasis on "extension's program" instead of 4-H being the "community's program". A major value of extension education is that it provides opportunities for involvement of other people than those already busy; which helps them start up the ladder of greater participation.

For county or area development committees - first of all, it would seem that most of the people in these groups should be thinkers and have community viewpoint. Never invite a person to such a committee simply because he is a good farmer, or because he is an officer in a given organization and will represent it. The least important element to have in development committees is organization representation as such, for this frequently tends to build decisiveness into the committee from the beginning. But this does not rule out the possibilities that from time to time or in a particular situation it may be especially desirable to have the involvement by name of a given organization or institution.

Analytical thinking will be the main job; therefore, encourage the selection of persons who can do this with the total community in mind.

Consider the social systems of the county or area - the different localities or communities and the social profile - for these are what you should be mainly wanting to have represented. Start small with recognized general community leaders, and involve others as needed, temporarily for special purposes if not permanently. Organizational people will become included, but not simply for this reason.

For commodity planning committees and demonstrations. Here it is safe to assume that the main type of leadership to be concerned with is subject matter interest and knowledge. However, thinkers are in many cases to be desired over size of business and excellence; much depends upon the purposes of the committee or one's expected roles in given project activity.

For demonstrations and places of field trials, as a means of teaching others or getting spread of given practices, the first criterion for selection must be the amount of influence one seems to have within the community or particular segment of population one is hoping to reach. For without this influence, no amount of excellence on the part of the demonstration will motivate very much spread among the people. People are generally best reached through leaders of their own status group or level. This is why special care must be taken in selecting places for demonstrations and teaching points, when attempting to work with low income families, ethnic groups or others of significantly different social alignment.

Sometimes a person having leadership influence may not be ready to serve as a commodity committeeman or demonstrator. In such cases it is far better to take the time to make them ready, through perhaps several months of individual work with him, than to go ahead with some other person who is ready but has little or no followership or influence among the particular families you want to reach.

This also raises the question as to whether a person should be selected for a leadership position, such as for a development or project committee, who is known to be negative or antagonistic to the purposes at hand, just in order to have "better representation", in the hope that he can "become convinced or developed"? The general answer to such a question is No; why purposely stack the cards against success at the start when success may be difficult at best. But a little later, Yes; after personal contacts perhaps have created favorable interest or positive motivation. After all, constructive critics are highly useful. All in all, the answer to the whole question depends much upon the overall situation.

Use a Systematic Procedure

Leaders are usually well chosen but sometimes mistakes are made and projects fail because the selection method was not approved by the group or inadequate leaders were selected. In leadership selection, it is usually desirable if some group expression can be secured. This gives the selected leadership a feeling of confidence that they have support. The group also feels that their resources are being used and that they have leaders who understand their needs and problems and will conform to their norms.

People are generally somewhat reluctant to accept as leaders people from outside their social structure. Designation of leadership by some outside official is not generally an effective method to secure competent acceptable leadership.

A number of models or theoretical concepts for identifying leaders have been developed and tested by social science researches and experimental studies of recent years. Each requires the getting of specific data, but by practical, easily manageable ways. Five of these models or methods are briefly described here.

1. The reputational method. The name should make this method self-explanatory; it means the persons who have a local reputation for being actual or potential leaders of given types. The method involves asking 3 or 4 persons to serve as judges (say banker, school superintendent, and clergyman) to each name the 5 or 6 persons in the community who they consider to be most interested in the subject, program or leader role under consideration. This may be done for a county or larger area as a whole, or for several local places within it in order to make up a sizeable list.

Then the names obtained are sorted by frequency mentioned, and those of high frequency are accepted as possible selectees. From this list a final list may be drawn considering certain known other data about the nominees or situation that it may be necessary to consider. In some studies the first list itself is then surveyed with the same questions, to boil down the number further.

This method is usually used for identifying persons to serve on general community development committees. But it also may be adapted to selecting persons for work with 4-H clubs or in other leadership roles, by simply varying the type of questions asked.

For general development committees, the judges would be asked to name who they consider to be most interested in the general welfare of the community; persons who would most likely give effective leadership to community development type endeavors; persons who are considered by the people as having community viewpoint and whom in the judge's opinion the people would favor for heading up community-type projects.

Caution has to be taken to make sure that in trying to identify general community leadership, the judges are not thrown off balance by the increasing specialization of leadership today. Certain persons may have a high reputation in some regard but not be interested in or able to provide the general community leadership you may be wanting to identify.

Some recent work by rural sociologists in Ohio and Iowa with area resource development specialists, verifies both the practicality and the validity of this reputational method.

2. The decision-making or tracer method. First you select certain "actions" to analyze, then you trace down what happened or Who did What, in order to identify the persons who made or led in making the main decisions relative to the events or action selected. This method is believed by some social scientists to have much promise; it is easy to do and gets at actual leadership rather than identifying on the basis of impression and estimate. However, it is limited in use by the fact that it may be difficult to find an adequate "action" to trace down.

3. The formal position incumbent method, which simply means that you pick persons who are in selected organizations and public official positions. This method does give a rather complete picture of the current organizational leadership structure of a community at any given time, but most of the persons still may not be able to provide the type of leadership you may be wanting for given purposes. Certain questions also have to be decided; What period or time span is to be used for the persons in some of the offices will change from time to time. Also as mentioned before, organizational leaders generally have their own groups first at heart; therefore, much leader training about their new role as general community leaders must be provided.

4. The social participation method. In this method one attempts to determine who are the most active people in the community in terms of participation in existing organizations, on the assumption that these are or would be potential leaders in the community. Simple surveys can be constructed which measure people's membership in organizations, attendance, office holding, and the like. This method of identifying would require more or less a complete survey of the community or a careful study of the membership of all the organizations to be included.

5. The informal contact method. Through surveys and observations of visiting patterns and asking who people go to see for ideas or help in emergencies, persons can be identified who seem to have the respect of the neighborhood or group. This is an especially useful method of identifying actual or potential leaders among low income families where there is little other organized participation to go by.

Still other methods probably could be devised to identify the "true" current leadership of a population, as a guide for appointing or electing persons for given leadership positions or roles. But the important point of this discussion is that one should be systematic about leadership selection, and that the 5 methods briefly described represent systematic or deliberate approaches which help to provide more solid basis, consistency, and accuracy, than simply pulling names "out of the blue" based only on limited acquaintance.

Each of the 5 methods is easy to operate, and once you have used one or two of them, you will have a long list which can serve as a reservoir from which to draw persons for given programs. Such a list will undoubtedly include numerous persons whom you had never thought of before. By endeavoring to involve and develop them you will be greatly increasing the leadership base of extension education and community development in your county or area, as well as contributing to the development of people themselves, which is extension's primary objective.

Enlistment Calls For Tact

Recruitment of leaders involves far more than identification. Next comes enlistment or getting the persons identified to serve. Having started persons up the ladder by involving them in one particular occasion or activity is a basic step. Pinpoint prospects. Think about the person and his situation; anticipate his objections and have some answers ready.

Then decide on who should do the asking or inviting. Oftentimes it is more effective for someone other than a professional agency worker to do so, or at least to make the first approach; then this can be followed by an approach by the professional worker. Or perhaps just the opposite may be the most desirable in some other case.

At any rate plan on more than one approach. Also, do not push for a YES or NO answer on the first try, especially when enlisting persons for important positions. Give a person time to think about the matter; it is only fair to do so, for you must appreciate his situation. The extra time allowed also conveys a sense of importance about the job; also a feeling that you really want him.

Always explain the importance of the job when enlisting persons into greater participation or leadership, and briefly outline responsibilities or the things he is to do. Emphasize the worthwhileness of the program and satisfactions of service in working for such goals. People like to be part of a useful and going concern. Certainly don't pick persons just to attend some meeting for the record's sake; have follow-up educational purpose in mind and try to identify and enlist persons accordingly. Keep in mind the previously described types of leaderships.

Aim to begin enlistment of a leaders by personal contact; telephone calls and letters simply do not afford ample opportunities for explanation or to convey importance of the job and your sincerity.

Group selection is by far the greatest motivating force for enlistment - that is, having been selected through some form of group decision or expression of desire and support on the part of the group. Such enlistment establishes a relationship of leader responsibility to the group and group support to the leader, which is far stronger than merely agreeing to do something for somebody personally.

Of course the purpose for which a leader is being selected sometimes necessitates agent selection, but the more that you can build some kind of group involvement in the process, the better it will be. This even might be simply discussing with two or three persons or a relevant committee the question of who should be invited to attend the given meeting, for example - "what kind of a person should go, what do we want then to do afterward, and what suggestions do you have"?

Of course, in launching work with new limited audiences, such as with families of low income, individual work with 2 or 3 families here and there is the first step. Based on the rapport and motivation thus developed, the next step is small group work involving a few families in one or more group type projects or activities. Move to more formal organization only as necessary to achieve goals outlined. People are developed - leadership is developed- as they learn from expanding experiences, opportunitites and responsibilities.

Finally, make use of leaders invited into programs. As soon as possible open opportunitites for them to serve or contribute. Provide them guidance, training and assistance. Then give them recognition - words of commendation and encouragement.

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A basic guidesheet to help make plans for training leaders follows, with blank form filled out as an example.

This guide in blank form has become widely used as a teaching tool for use in staff training, and also as a planning tool in counties. It emphasizes and applies the idea that training should be geared to the specific responsibilities and needs of the specific leaders being trained. It may be first taught by putting on chalkboard in blank form. In many cases it is duplicated in blank form for use as worksheets in training sessions, or for actual use as a planning tool.

GUIDESHEET FOR PLANNING SYSTEMATIC LEADER TRAINING

(Example) 4-H Organization Leaders
Which Leaders

Responsibilities - duties What are leaders to do?	What leaders need to know in order to perform jobs well Knowledge - skills - competencies	Training content that should be provided as suggested in column 2	General plan of action to provide training How - When - Who teach?
Explain 4-H and overall extension - objectives, methods Help boys and girls organize their 4-H clubs Arrange meeting places and similar plans Lead and teach local club in planning monthly and yearly programs Contact new members' parents Discipline, encourage and guide boys and girls Contact and develop co-operation of other resources, as needed Attend to publicity Help enlist subject leaders Cooperate with subject leaders Attend training meetings Enlist and train junior leaders Council with individual members; explain and help with records	Understanding of extension and 4-H How to organize a club What makes a strong organization What makes a good meeting Simple parliamentary procedure What makes a good program; how to plan Basic developmental needs of youth; handling of children County 4-H program and general layout of subjects, activities How to enlist and help subject leaders How to work with junior leaders The why and how of 4-H records Parent and home situations and how to develop cooperation How to publicize local 4-H work and build relations Principles of planning programs and activities How to train and plan with officers and club members How to make exhibits, demonstrations	Overview of extension and 4-H - philosophy, objectives general set up Club organization, duties of officers and adult leaders What makes for good meetings and activities, and how to plan them with club. Make meeting agendas County 4-H program and calendar Suggestions for publicizing 4-H and making other contacts Parent responsibilities, how to develop cooperation Basic principles in developmental needs of youth and application of them to 4-H work Suggestions on working with subject leaders and junior leaders How to counsel with individual members about their work; records	In September a conference or workshop with all leaders In January a conference for all leaders - agents and specialists Newsletters to leaders General publicity and news stories Office conferences and home visits Personal letters Other methods Aim will be to have a county 4-H leaders' short course of 4 to 6 sessions, annually

Developing Community Group Action In Areas Of Disadvantage [1]

A major step in expanding programs on improving economic conditions and quality of living in disadvantaged areas is to move beyond individuals and homes to dealing with common problems through some kind of community-wide action. However, a basic requirement in this is to bridge the gap in communications between the people with the problems and the agencies who have programs for dealing with them.

Area and county extension agents in the Charleston Area of West Virginia (U.S.A.) set about to do this through a series of community improvement workshops. We had found that two factors generally stand in the way of effective community problem solving. One is that the people are not aware of services and programs available, or at least do not make the first move to contact them. The other stumbling block to action is that agencies do not really know the feeling and needs of the people.

Community Organization Formed

The first step in this pilot effort was to develop some sense of community spirit, organization and unified effort, as a basis for increasing communication to and from the people. This could only come about after intensive work with individual families and special groups on home and personal problems. We had done this during the last couple of years in several small communities, from which has resulted considerable success in developing rapport, awarenesses, changed family practices and new attitudes. The next step naturally was community effort on community needs.

To launch this, visits were made with many of the families, during which time discussion centered around neighborhood conditions and the problems which many of the families seemed to have in common, such as education, jobs, insurance, health, housing and public services. Then, two or three meetings were held in each of the places, purposely to further discuss community-wide conditions and concerns as community groups. Besides the ideas on problems and projects that come out of this activity, leadership began to emerge; also a sense of community responsibility, goals and motivation. The idea of forming an organization was approved and officers elected.

The visits and meetings also established in the minds of the people a broader image of the work of the extension agents, who up to that time had been working with them largely on individual family matters.

Community Improvement Workshops a Key

Extension agents suggested during the meetings the idea of joint agency-citizen problem-solving action, which led to having community improvement workshops. These were 3-hour meetings of citizens and agency representatives. They were preceded by preparation in the form of study by citizen self-survey committees. A community improvement committee of 7 or 8 people was formed in each of these small communities.

Committee members chose specific problem areas on which to work and conducted studies of such areas as roads, utilities, health, education, welfare and recreation. The committees contacted other local residents in order to involve them in identifying problems, and they met weekly with the area extension agent for guidance and consultation. After six weeks of thoughtful analysis of community needs, the committees prepared Community Problem Reports. The reports were developed from both written and tape recorded findings of the committees.

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[1] Thomas E. Woodall and E.J. Niederfrank - Developing Community Group Action In Areas of Disadvantage. ER&E-36 (6/68) Federal Extension Service U. S. Department of Agriculture

Representatives of 10 agencies were then invited to participate in a Community Improvement Workshop in each community. These included the State Road and Public Service Commissions, Health and Welfare Department, Board of Education, Soil Conservation Service Farmers Home Administration, Employment Security, Vocational Rehabilitation, and the Community Action Agency of the Economic Opportunity.

The format for the workshops was informal and simply structured, in order to encourage maximum participation. An agenda of five steps was used. (1) Community leaders opened the sessions, with the area extension agent also making brief introductory remarks. (2) Each agency representative then made short statements concerning his agency and the problems of people as communities. (3) The Community Improvement Committee then discussed its findings in the form of a report to the agencies and local people present.

Next, (4) came a planning session, which proved to be the highlight of the entire workshops. This was the meeting of agency representatives and respective committees, seated at conference tables, to discuss respective problems and proposals. Then, working together, they focused upon the development of plans and program to solve the identified problems.

Following the planning period, (5) another general session was held, during which the Community Improvement Committee and agency people summarized the problems discussed, the solutions arrived at, and plans called for continued close contact between citizens and agencies through further meetings in the communities as planned programs were carried out.

Many Improvements Underway

Both citizens and agencies were enthusiastic about the accomplishments of the workshops and the tangible achievements since made. In one community plans were developed for a community water system through the cooperation of the Farmers Home Administration. Work on obtaining natural gas service is now nearly completed. Road recommendations were immediately surveyed by State road officials, and work has now begun on them. Health Department officials agreed to obtain a permit for the community to dump garbage and trash at officially designated locations within the county. They also are advising leaders on how to deal with a large body of stagnant backwater which serves as a breeding ground for mosquitoes. The idea of erecting a traffic signal at the dangerous local railroad crossing is being studied by road and railroad people.

In another community natural gas and water system services are now assured because of joint plans arrived at by the citizens - Farmers Home Administration,Public Service Commission and the gas company officials. Road Commission crews are busy carrying out recommendations by the committee. This already has resulted in improved garbage collection and school bus service to the community. Adult basic education classes have been established cooperatively by the community's Education Committee and the local Board of Education, after 27 local citizens indicated their desire for further education.

Inadequate recreational programs have been a problem in this area for years. However, Recreation Committee members were able to develop plans, in cooperation with the Board of Education's Recreation Supervisor, for both day and evening recreation for children and adults.

The plans include transportation of children to a swimming pool for weekly swimming lessons under the supervision of competent instructors. A Boy Scout Troop was formed, when a person in a leadership education course saw the need and possibilities, and volunteered to be Scout Master. The Health Committee wanted more work done and, for one thing, set up an afternoon cancer clinic at which 67 women of the community's 87 families attended the first session.

Partners In Community Progress

But the implications of this effort go far beyond the tangible improvements that have or will result from the workshops. Agency representatives were brought face to face with the true situations of communities, which enabled them to focus resources on problems and develop feasible solutions on a much more valid and realistic basis than otherwise. The presence of several agencies in the community at the same time permitted much more comprenhensive and unified approaches to problem situations than is possible when agencies are involved independently.

The discussion of problems and plans in the workshops represented an approach entirely from the perspective of the people themselves. All too often community development efforts attempt to superimpose expert or professional judgment upon the community, generally with emphasis on promoting particular solutions instead of solving problems.

The extension agents who were involved in this method see it as a solution to the alienation and conditions that the people of the inarticulate and relatively isolated rural communities of Appalachia have had to live with for far too long. They believe it also demonstrates that people in such communities can and will become interested in doing something about their problems, if given adequate leadership from outside.

Factors such as Land Tenure, Credit Systems etc. that influence Extension Development

Other factors such as land tenure and credit systems influence extension teaching Erven J. Long described three categories of institutional impediments to rural progress, those which inhibit the play of incentives, those which inhibit the capabilities of rural people, and those which inhibit the development and utilisation of science and technology. All impediments to rural progress are of vital concern to the extension service. In most instances, it is outside the province of extension to change existing institutions. But the influence of these institutions must be taken into account in planning and conducting extension educational programs.

Institutions which inhibit the play of incentives [1/] Institutions typical of an under-developed country inhibit the play of incentives in encouraging individual initiative - incentives to work hard, to save, to invest, to innovate, to take risks, to acquire skills. Pointed as they are toward the survival of the species, these institutions place the emphasis on stability and security for the group rather than rewards for innovations to the individual. This emphasis is not achieved by any single institution, but by an inter-locked system of institutions which work in concert to achieve this one general result.

Land tenure institutions are, classically, considered to be at the heart of this basic problem in many of the underdeveloped countries. Labor is so plentiful, and off-farm job opportunities so limited, that ownership of land carries with it almost complete control over the lives of the landless. If the tenant chooses to work a little harder, or invest some of his savings in his farm, he must share heavily with his landlord the fruits of his extra labour. This, if he is lucky, if he has some economic or political bargaining power. More often than not, and given a little time, the landowner finds ways of absorbing virtually all the extra production for himself. Thus he learns not to smile, lest the landlord raise his rent. As the Eastern proverb has it "A smile on the face of a tenant speaks of the stupidity of his landlord".

[1/] Erven J. Long - Institutional Factors Limiting Progress in the Less-Developed Countries, Agency for International Development 12/29/1963 pp 4-8.

There are, however, other institutions which work with equal effect to deaden the play of incentives. The credit system often holds farmers in total bondage to the money lenders, sometimes for money borrowed by long dead ancestors of the indebted farmers. Interest rates often run 100% or higher per year. Illiterate villagers frequently have to rely on the money lender's calculations, which are not always made with scrupulous honesty. Worse still, very little of the credit serves the useful purpose of making the farmer more productive. Most developing societies accord high esteem to ceremonies; in some countries over half the money borrowed by farm families is spent on weddings, funerals and the like. And of that which is spent for so called "production" purpose, rather little really finds its way into improved farming, so that the credit does nothing but keep the farmer in debt. A study with which the writer was associated in India indicated that not more than 5 to 10 per cent of the short term investment - what economists call "variable capital" was used in a way that increased the farmer's productivity, and hence his total income. This heavy burden of indebtedness for unproductive credit obviously discourages the farmer from making productive investments, or any kind of innovation which requires even a little capital, by soaking up his potential savings and cutting off possibilities for additional borrowing.

The pricing and marketing system, or lack thereof, also destroy the play of incentives for the farmer to work, to invest, or to innovate. Most developing countries have only rudimentary pricing and marketing systems. Prices for identical products often vary widely from village to nearby village. They vary even more widely from village to city, and more widely still from time to time. Farmers commonly do not know of higher prices in other nearby areas or more distant cities. If they do know, they often cannot take advantage of higher prices elsewhere, as they are bound by prior understandings, socially more compelling than contracts, to sell to the money lender in whose debt they are. And their resources are far too meager - even if they had storage facilities - to await the higher prices which will come when today's production gluts give way to tomorrow's famine. Thus the entire marketing and pricing system works against inducing proper investments at and proceding planting time, as the promise of future gain beckons only weakly and from great distance through the fog of uncertainty which enshrouds the typical farmer's price expectations. The problem is not, in most countries, so much of prices being too low or of marketing margins being too high; it is primarily that of the farmer's uncertainty of what the prices will be and, especially, of whom will get the higher prices - he, the landlord, or the money lender.

The type of social organization - the greater family or the tribe - also profoundly affects the play of incentives. Americans take for granted a concept of family organization which applies powerful leverage upon the primary family head to strive on behalf of himself, and his wife and children. This is not, however, the norm in the developing countries. Rewards for unusual effort do not normally go to the man who makes it - even though he receives the money in the first instance - but to an elder or chieftain who distributes it through a tangled skein of family or tribal relations. Indeed, extreme social censure is brought to bear on anyone who holds for himself any appreciable portion of the rewards for his own extra effort. True enough, in some societies the individual appears to be motivated to work for the greater family or tribe rather than for himself or his immediate family; but this motivation is probably more apparent than real. In any event, the entire greater family or tribal structure places emphasis upon the individual having carefully assigned responsibilities to the larger group, discouraging any imaginative deviation from these responsibilities. For deviation by the individual invites only censure from the group if he fails, and rewards for others if he succeeds.

The problem of risk-taking must be given special attention. Not only all of the institutions discussed above, but also the very nature of his economic situation discourages the farmer from taking the risks inherent in innovation. "Nothing ventured, nothing gained", is a true adage of the human enterprise - but a dangerous principle for the farmer in a developing country. Living as he does at the very margin subsistence, what he ventures is different in kind from what he might hope to gain. The difference between 50 and zero is much greater than that between 50 and 100 - if 50 is the minimum necessary to survival. And although the greater family or tribe shields the individual from losses caused by circumstances accepted as beyond his control, it does not normally do so for losses caused by his playing with new and therefore unsanctioned ideas.

Thus, the greater family or tribal organization of society is, in most developing countries, probably the most potent single inhibitor of the play of those incentives necessary for inducing progress.

Institutional Factors inhibit the Development of Capabilities of Rural People

As stated earlier, development appears to depend primarily upon the development of human resources and capabilities. We are concerned at this point with a factor affecting the development of human capabilities - namely, the opportunity for individuals to acquire meaningful experience while they are young enough to try new ideas and to learn from this experience. Our society deliberately provides children with opportunities for developing self reliance, to prepare them for their self-determining roles as young adults. This is not true in most developing countries; decision-making is restricted to family elders long after the offspring have reached full adulthood. Even such decision as when to marry, what vocation to follow, how to spend their earnings, etc., are made for, not by, the young and even the middle-aged adult. Also, in our rural society the family farm system of agriculture develops entrepreneurial and management skills, by requiring every farmer to think and act for himself, rewarding him for his good judgements, penalizing him for his mistakes. Most other systems of land tenure do not provide this built-in device of self-education. This may well be a fatal weakness, in the long-run, of the collective or cooperative farm, or other modern forms of group tenure. They may be responsive in the short-run to the introduction of new knowledge and technology, but they so limit the numbers of people who acquire managerial and entrepeneurial skills that, in time, they become rigid and sterile of new development potential.

Institutional Factors which Inhibit the Development and Utilization of Science and Technology. 1/ The extension and service institutions carry science and technology to farmers. In great part, as in our own country, this function, as well as research and education, must be carried out in the so-called "public sector". This is important when we recognize that, in developing countries such as we have described, government has been largely evolved for the purpose of maintaining order and collecting revenue. Although this is most apparent in a colonial system, it is inherent even in a politically independent country to the extent that it has pursued static rather than dynamic ends. As such countries begin actively to pursue progress as a central goal of policy, an entirely new role is demanded of government and of public service. Rural development, as distinct from the maintensnce of order in rural areas, requires not only that public officials have technical rather than merely administrative competence, it requires that they assume a servant rather than a master relationship to the farm people with whom they work. This is a difficult transition to make, especially since in these societies the deepest cultural values are inherent in status relationships. But a democratically oriented, progressive agriculture appears to require a complex system of government services to farmers - research service, extension service, credit service, marketing service, price supporting service, etc. And although names of these functions can be changed, the fundamental service relationship between the public agent and the individual farmer is probably essential to development. At least, this is our hypothesis. As any other system based upon authority rather than upon enlisting the informed self-interest of the farmer, it has never appeared to work well anywhere.

1/ Erven J. Long - Institutional Factors Limiting Progress in the Less-Developed Countries, Agency for International Development 12/29/63

Institutions of formal education and research which have been developed during the essentially static past of the typical underdeveloped country must also make profound adaptations in their new roles as participants in the development process. We list below some of the more basic changes which will commonly be required.

In research, a change of attitude as to its basic purpose is required, anchoring it solidly in the development needs of the country's agriculture, rather than as an end in itself. This requires more than a recitation of the right words. It must lead to careful analysis in selection of research problems. For the numbers of problems are legion, and the research resources and competencies extremely limited. Selection of problems for research must be based on criteria such as relative importance to development, probability that research may find a solution, probable usability of the solution by farmers, and probable cost of the research.

For research to participate in agricultural development there must be new administrative and scientific alignments, a breaking down of barriers which separate related scientific disciplines, in order to meet the requirements of the problems needing solution. In most of such countries new, effective research on animal production, for example, is almost impossible because of the administrative and scientific separation of animal husbandry from crop production. Similar barriers, almost as high and inpenetrable, separate soils from crop production, forestry from soil conservation - and economics from almost everything relevant to farming.

The new orientation of research toward development objectives will require much closer relationship with extension and educational efforts. And, especially, extension efforts must be anchored much more in such processes as exist or can be stimulated through which farm groups can make their wishes known. Much too commonly, research findings are shot out at farmers from the research bastions, through a top-down administrative bureaucracy called "Agricultural Extension" or "Community Development". Much more effective means of farmer participation and indeed control, which is the real heart of our extension system, must be evolved if research and extension are to become truly at one with the agricultural development process.

The agricultural colleges will also undergo substantial change as they adapt themselves to developmentary roles. The subject matter of courses will be based upon local research and experience, rather than material from foreign sources. Teaching methods will adjust to emphasize the creative use of science to achieve specific rural development objectives, rather than upon rote memory or scientific principles unrelated to practice. Examination and other student appraisal devices will be modified to identify potential agricultural-development capabilities of students.

Chapter 9.

EXTENSION TEACHING METHODS

The essential function of the extension worker is to create situations in which others develop educationally. Learning is an active process on the part of the learner. Unless he becomes interested to the point of putting forth mental and physical effort to learn, nothing is accomplished. It is the task of the extension worker to: "(1) provide people with an opportunity to learn, and (2) stimulate mental and physical activity that produces the desired learning." [1] Effective extension methods satisfy these criteria.

People learn best in different ways; some by listening, some by seeing, some by doing and still others through discussion. Studies have shown that the more different extension teaching methods are used, the more people change their practice. The more exposures per individual to a new practice the more likely the person will find his preferred method of learning.

Different extension teaching methods are most effective in varying situations and at different stages of the adoption process. All people do not learn at the same speed, some may be at the stage of trying a new practice and want to know the details of how to do it when others are barely aware of the practice or just becoming interested. For these reasons use of a variety of teaching methods is most effective.

As indicated in Chapter 7, extension methods may be classified in three groups on the basis of the number of people they are designed to reach. These are: (1) individual methods, (2) group methods, and (3) mass methods.

Individual Methods

Learning is an individual process. Although extension agents must use group and mass methods to reach large numbers of people and to stimulate joint action in planning and carrying out projects of common interest, personal contacts serve many essential purposes.

The personal influence of the extension worker is a vital force in securing cooperation and participation in extension activities and adoption of improved practices on the farm and in the home. People will listen to the advice and suggestions of an extension worker whom they feel they know, like, and whose knowledge they respect. Integrity on the part of the extension worker is indispensable. If you do not know the answer to a question, don't bluff but tell the villager you will find out and let him know. Then be sure to do it.

Farm and home visits are essential elements of extension education. They provide a means of personal communication between the farm family and the extension worker in an environment where they can discuss matters of common interest in privacy and without the distractions and interruptions commonly experienced in group extension activities. Farm and home visits serve the following useful purposes:

- To acquaint extension worker with the farmer and farm family
- To answer specific requests for help
- To gain first hand knowledge of problems faced by the farmer or villager

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[1] J. Paul Leagans, Professor of Extension Education
Cornell University, Ithaca, New York. USA.

- To explain a recommended practice
- To follow-up and observe the results of recommended practices
- To plan an activity such as a demonstration, or a meeting
- To invite the farmer or villager to participate in a planned activity
- To discuss policies and programs
- To recruit, train or encourage a local volunteer leader.

Careful and adequate preparation is the key to a successful visit as with all extension methods. Visits are expensive in terms of time and transportation. When an extension worker must walk or ride a bicycle many kilometers to visit a farm or a home, he will consider very carefully the purpose of his visit and combine several visits in a single trip if possible. He should plan his visits just as carefully when traveling by automobile.

Preparation for a visit will include a review of all the known facts about the farm, the farmer and the family, specific information concerning the problem, purpose or activity involved and materials such as leaflets and samples that may be left with the farmer.

The approach you use often determines the success of your visit. The attitude of the farmer affects the length of the visit. If he is very busy, come quickly to the point and end the interview as soon as the main purpose is accomplished. If he wants to take more time and show you his fields or livestock, fit in with his desires to the extent your time permits.

In making the visit, be conscious of your role as an extension teacher. You are expected to provide sound technical information and relate it directly to the farm and the farmer through informal discussion of his crops, livestock, or living situation. Allow the farmer or farmer's wife to do much of the talking but guide the conversation into constructive channels. In addition to the planned purpose of the visit it may provide an opportunity to arouse the interest of the family in other features of the extension program. A visit planned to investigate an insect outbreak may provide an opportunity to invite teenage boys and girls to join a youth club, or the mother to attend a food preparation demonstration.

Follow local customs in accepting hospitality. If visitors are expected to drink tea with their host, then drink tea but be careful not to acquire a reputation as one who spends all his time drinking tea.

End the visit tactfully when your mission is accomplished by inviting the farmer to visit your office or suggesting that you will return at a later date with more information or to check progress.

Be cautious about discussing a farmer's situation with other farmers and do not become a carrier of gossip. Success in the use of recommended practices may be publicized to encourage others of their value but publicity on financial success may make the farmer a target of requests for gifts or loans from relatives, friends or unscrupulous acquaintances.

Finally, make a good record of the visit as background for future contacts and as a reminder of necessary follow-up. Be sure to send him the information or materials you promised during the visit.

Office calls are an expression of interest on the part of the visitor in something he thinks you have to offer. They are less expensive and time-consuming for the extension worker and offer some but not all of the advantages of a home and farm visit. The caller is less at ease than when at home and may be more sensitive to your attitude. The volume of office calls is related to the degree of public interest in the program of the extension service, the relationship existing between the local extension worker and the villagers, and the accessibility of his office to rural people.

Have your office so arranged that visitors feel they are welcome but not to the extent that it becomes a loafing place. A few chairs, a bulletin rack with up to date informational material and neat display relating to current extension activities will contribute to this purpose. A clean neat office is attractive and encourages both extension staff and visitors to keep it clean.

Some visitors are shy and find it difficult to tell you the real purpose of their visit. Try to put him at ease with friendly conversation and ask questions to help him clarify his problem or request. Satisfy his purpose to the best of your ability and terminate the interview without letting it drift into a long aimless visit. This can be done tactfully by asking if there are any other matters with which you can help. A careful record of office calls provides a basis for follow-up activity and may serve as one measure of public participation in extension activities.

Telephone calls serve a purpose similar to office calls. Although face to face contact is missing they have the advantage that they may be initiated by either the farmer or the extension worker. They are useful in soliciting and giving specific information such as treatment of a known disease, control of infestations of pests, variety of tomatoes to plant or to request a bulletin or circular. They provide a means of follow-up and evaluation of the effectiveness of radio or television broadcasts. People will call the extension office to request a certain new bulletin or circular mentioned in the radio announcement. Extension offices in highly developed services sometimes find it necessary to employ special telephone numbers and taped recordings to answer the flood of inquiries after especially interesting programs or announcements. Unfortunately, many countries do not have efficient telephone service in rural areas and this method of extension teaching is of limited application.

Personal letters are useful in answering requests for information, as follow-up after visits and office calls and in contacting local volunteer leaders. Studies in the United States indicate that letters are not considered an important source of information by farmers, and used alone do not change many practices. But a request from a farmer for information indicates genuine interest and should be answered promptly and courteously. The use of letters as a teaching method is quite limited in countries lacking an efficient postal service or where many rural residents are illiterate. But they are an important and sometimes the only means of internal communication in an extension service.

Be careful that the information you give is simple, understandable and complete without being wordy or including unnecessary information. Put yourself in the shoes of the person to whom you are writing. Remember, the words you put on paper are all he has to go by in determining your meaning.

Informal contacts provide many opportunities for effective extension work. Every experienced extension worker has had people stop him on the street or in the village to ask a question. Often, seeing the extension worker will remind the villager of a problem about which he would like technical advice. Market days, picnics, holiday celebrations and religious events bring people together. Where people gather, they talk about current problems in farming and rural life. By attending such events, the extension worker will become better acquainted with his people, learn of their wants, needs and problems and be able to impart information on an informal basis.

An FAO rice processing expert was greeted with suspicion when he visited a processing plant. He noticed some workers resacking some rice from broken bags. They were having trouble tying the bags securely. The expert picked up a piece of twine and fastened a full bag using a 'miller's knot'. He then shook the bag to show that it was secure. Immediately, the workers demanded that he show them how to tie the new knot. He did so while the plant manger looked on. Seeing that the expert had a useful skill, the plant manager invited the expert to his office where he was able to accomplish his mission. An effective extension worker is skillful in using informal teaching situations to gain the confidence of his people and to teach useful improved practices.

Group Methods

Group methods include general meetings, method demonstrations, result demonstrations, meetings at result demonstrations, farm walks or tours, field days or farmer days at agricultural experiment stations, short courses of instruction, farmer training centers, farmers, rural youth and homemakers clubs and group projects.

Group methods are especially effective in moving people from the interest stage to the trial stage of learning. When the reaction of the group is favorable, the majority of members may proceed to the adoption stage.

Group extension methods, effectively arranged and conducted take full advantage of the external and internal forces of group dynamics. People react to the extension worker and to the ideas expressed by other members of the group. Properly stimulated and directed, these forces can lead to changes in practice by large numbers of people.

Meetings are one of the oldest and most important methods of extension teaching. Properly arranged and conducted they rank high in ratio of practices adopted in relation to cost as compared with other methods. The success of meetings as a teaching device depends largely upon how they are viewed by the audience. Is it their meeting or the extension worker's meeting?

Many meetings are planned by the extension worker to get across a particular idea or practice. Sometimes what seems like a good meeting results in little change in action or attitude by the people who attend. This may be because the extension worker is trying to get people to adopt a practice before they are ready. Perhaps they are hardly aware that the new practice exists, or have not had enough time to evaluate it in terms of their own situations. Effective meetings are oriented to the current thinking and recognized needs of the people.

Kelsey and Hearne [1] identify five general types of meetings involved in extension work.

1. Organization meetings include board of directors meetings, youth clubs, homemakers clubs, executive committees and many others. Organizations usually meet periodically and follow an agenda. Their purpose is to take action and get business done but they do provide an opportunity to develop leadership and training in social action processes. Much can be done to improve the quality of organization meetings. Many are considered dull and draggy.

2. Planning meetings requires preparation of a large amount of situation material. Much of this must be done by professional extension workers who should resist a natural tendency to dominate the meeting. Giving leaders a part in preparing situational material helps to counteract this tendency. Few rural leaders are interested in attending a planning meeting merely for the sake of planning. Their interest can be aroused in specific problems and objectives. For this and other reasons, extension workers need to make a special effort to assure attendance of the right people. A formal invitation or request to attend a planning meeting is not usually sufficient. Personal contact by an extension worker or another leader with discussion of problems and needs to be considered is much more effective in building interest and in assuring attendance by representative leaders.

3. Training meetings are an essential element in developing and using rural leaders in extension. They are limited to selected individuals who have accepted responsibilities as leaders and need help in doing the job. The program content is usually narrow in scope and specific with direct application to the job. Extension workers should take care not to try to cram too much information and advice into a single training meeting but allow time for discussion and practice. Each meeting may well be one of a series for the same people conducted over a period of time.

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[1] Kelsey and Hearne - Cooperative Extension Work, pages 406-408.

4. Special interest meetings are arranged to serve the educational needs of groups with common interests such as gardening, fishing, dairying, home management, or sewing. They may be held singly or in series over a period of time. Since attendance is voluntary, everyone who attends is presumed to be interested in the subject, and the subject-matter leader can move along faster than he could in a mixed group. Questions and discussion are more spontaneous and lively.

5. Community meetings, as the name suggests, are for all the people in the community, men, women, young people, with all the varied interests of the community. Some people come out of curiosity or for entertainment; others have more serious interests. Although special interest meetings have largely replaced community meetings in this age of specialization, they still have their place. Women and children are interested and involved in many farm activities. It is equally important that men be interested in the improvement of their home life and in the educational activities of their children.

The following guidelines will make meetings more useful and effective.

Plan the meeting with representatives of the people for whom it is held. If no organization exists to sponsor the meeting, call together a committee of representatives. Discuss with them the type of program you have in mind and get their reaction. In some cases the committee will give their approval as a courtesy to the extension worker. Perhaps you can judge their interest by the enthusiasm of their response. If they disapprove your suggestion, the whole matter should be dropped.

When the type of meeting has been approved, get agreement on purposes and means of achieving each purpose. Consider various alternatives and get the committee to decide. Do they want a speaker or a discussion, or a combination of both? Who should be invited? Where should the meeting be held? Who will make the arrangements? As each decision is made, clarify the responsibility of each member and make a record. If possible, arrange for one of the committee to preside over the meeting and divide other responsibilities among other members. In this manner all will share in the success of the meeting and feel responsible for any short-comings. It is better to have leaders conduct the meeting, even though they may not do it smoothly and efficiently, than for the extension worker to take it over and assume full responsibility. The program may flow more smoothly but it becomes the extension worker's meeting rather than the peoples!

Publicize general meetings well in advance. Publicity should announce the subject of the meeting, time and place it is to be held, who is invited to attend. Build up interest by indicating the need for the meeting and the purpose it is intended to accomplish. Further publicity may indicate who is to appear on the program and the qualifications of speakers as well as the names of committee members responsible for the program and arrangements. Announcements in newspapers, radio announcements and posters are effective media where available. Well-designed wall posters are also effective reminders. In some societies, the mayor or head man will see that people know about the meeting and are expected to attend if he is involved in the planning.

Consider these factors in planning meetings:

1. Size of the audience - Large audiences can receive information but participation is reduced and they have difficulty in making decisions.
2. Character of the audience - Some audiences are incapable of participation through lack of experience, education, or for other reasons.
3. Facilities available - If rooms are available, large audiences may be broken down into small committees or discussion groups for decisions or to increase participation. Otherwise, participation may be limited to those on the platform.
4. Make audience as comfortable as possible. This involves such matters as seating arrangements, heating or cooling of the room, lighting and ventilation.
5. Time - do not fill the program too full. Active people can seldom sit still for more than an hour at a time and few meetings should last longer than one and one-half hours. Provide for an intermission in longer meetings.
6. Do not allow unrelated announcements and unscheduled speakers to prolong the program and distract the audience.

Programs may be arranged in different ways to suit the purpose intended and the audience. The size and character of the audience, the facilities and time available determine the type of program. Small audiences allow for maximum audience participation. With large audiences, the program may be limited to speakers or a speaker and panel. A panel of local people can help relate the presentation of the speaker to local conditions and problems. Smaller meetings may be conducted with speakers followed by open discussion, or as general discussion only. Keep introductions of speakers short. Merely tell his name, his subject and how he is qualified to speak on the subject assigned. Do not give a lengthy account of his education or tell what a fine speaker he is. The audience will decide that for themselves.

Studies of methods of presenting subject matter at meetings establish these interesting facts. 1/

- The lecture-only method was weakest of five methods studied.
- The holding of a discussion or conference type meetings increased the number of people influenced to adopt improved practice by 21% over lectures.
- Use of local leaders in meetings influenced the adoption of seven more practices per hundred farmers exposed than did the conference or discussion method and was 1.28 times as effective as the straight lecture method.
- Use of charts increased the effectiveness of lectures by 42% and film strips by 55%.

Demonstrations 2/ When you teach by demonstration, you show someone how to do a new job; or you show him how to do an old job better.

The strength of the demonstration lies in its obviousness - its appeal to logic and reason. It is there before your eyes. It works better than the old method. Its use would bring improvement.

Extension uses two types of demonstrations - method and result.

Method demonstration is the oldest form of teaching. Men taught their children how to hunt; how to cultivate; how to survive, through forms of the method demonstration long before writing and probably even before language itself developed. Learning by this process seems almost instinctive. In the jungle the tiger kitten learns to hunt by following and playfully mimicking the stalking tigress.

In the method demonstration, we show how to do a job step by step, like building a latrine, treating seed, planting seed in lines or using a mechanical duster to control insects. Your demonstration will be more successful if you will follow these steps:

1. Decide exactly what you want to accomplish with the demonstration. Test these objectives against such factors as whether or not the practice really is important; whether or not people can afford to follow it; whether or not supplies and equipment are available in sufficient quantities to permit its widespread use.
2. Gather all of the information you can find about the practice. Thoroughly familiarize yourself with the subject matter and, if possible, with the research results.

1/ Kelsey and Hearne - Cooperative Extension Work pp. 412 - 413.

2/ Using Visuals in Agricultural Extension Programs - ESC-561 International Cooperation Administration and Federal Extension Service, U.S. Dept. of Agric. pp. 23-25.

3. Talk over the problem with a few village leaders. Ask them to help you plan the demonstration. This is an important step because it establishes your liaison with the village; secures leader approval of the project; provides land and other essentials for the demonstration; is an actual teaching opportunity since the leaders are certain to learn more about the practice as they discuss it and help plan the demonstration. It is also helpful because this method involves more persons in the demonstration which encourages wide-spread discussion of the project.

4. Gather all of the materials you will need. These should include everything the farmer will need in order to apply the practice on his farm.

5. Plan your presentation step by step. Include introductory and summary portions.

6. Whenever possible, rehearse the presentation two or three times - until you are thoroughly familiar with the steps and know exactly what you want to say or do at each step of the action.

7. When the people are gathered to watch the demonstration explain what you are going to do; why it is important for them to learn the new method; ask for persons in the audience to help you with different tasks.

8. Go through the demonstration. Explain it step by step. Pause to answer questions from the audience. Repeat difficult steps.

9. Check the effectiveness of your instruction by having members of the audience do one or more of the steps. In an ideal situation each person would have an opportunity to practice each of the steps in sequence until the skill is thoroughly learned.

10. Summarize the importance of the practice, the steps, the supplies and equipment needed. Distribute illustrated folders or other literature showing the step by step procedure.

In the method demonstration, actual materials, equipment and people are the best visual to use.

Often the method demonstration paves the way for the result demonstration and in such cases both should be considered as parts separated by time only. An example would be a method demonstration of fertilizer placement to be followed by a result demonstration as the crop matures.

"The result demonstration", in the words of the principal of the Himayatsagar Extension Training Centre near Hyderabad in central India, "Is one which shows after a period of time what happened after a practice is adopted. As an example, compost is put on a certain field. Good seed potatoes are planted and cared for. In the next field, no compost is used and poor seed potatoes are used. At harvest time the potatoes are dug in each field at the same time. The villagers have watched all during the planting, growing and harvesting season. They see how much better results are from using better practices. This is a result demonstration."

Comparison is the essential ingredient in the result demonstration. Whether it is a comparison between compost and no compost; good seed and poor seed; fertilizer and no fertilizer; dusting for insects and no dusting - the results are there for all to see and judge.

Advantages of the result demonstration, according to the Himayatsagar principal, are these:

- Furnishes local proof of the desirability of adopting a recommended practice.
- Is an effective method for introducing a new subject.
- Appeals to the eye and reaches the 'show-me' individual.
- Provides a good source of information for meetings, news items, pictures, radio talks.
- Furnishes cost data and other basic information.
- A high percentage of people will understand.
- Aids in developing local leadership.
- Establishes confidence in the extension worker and in extension work.

As in the case of the method demonstration, there are certain steps to follow that will make your result demonstration more successful:

1. Decide exactly what you want to accomplish.
2. Gather all of the information you can find about the practice.
3. Talk over the problem with the village leaders and ask them to help plan the demonstration and recommend demonstrators.
4. Develop a complete plan of work, showing each required step and indicating who will do what.
5. Select demonstration sites that are centrally located and near a road so people can get there easily.
6. Visit the demonstrators and make sure they are thoroughly familiar with the details of the plan, such as new cultural methods, new harvest techniques, record keeping and measurement of results.
7. Ask village leaders to encourage villagers to be present for the start of the demonstration.
8. Visit the demonstration plots often and hold meetings and tours there as the demonstration progresses. Have the farmer tell the story.
9. Keep records and compare the results with local practices.
10. Refer to the demonstrations in meetings held elsewhere. Write about them for newspapers and magazines. Talk about them on radio.
11. Plan follow-up demonstrations if necessary.

Tours and field trips [1] are methods of extension teaching which appeal to man's desire to 'go places and see things'. The 'things' to be seen may range from results on small demonstration or test plots to extensive application of new methods on actual farms.

In general, the tour or field trip includes more than one stop - the exact number depending on what the extension worker hopes to accomplish. The field trip for cultivators interested in line sowing obviously will be different from the field trip of government officials interested in observing rural progress.

It might be helpful to think of the tour members as individual cameras, being exposed to several different subjects or to several different angles of the same subject during the course of a day. The exposures are made in a planned sequence and when the individual returns from the tour he has an orderly picture story of the subject permanently recorded in his mind.

Like method and result demonstrations which the tour may or may not include, this extension method offers farmers the opportunity to see for themselves concrete evidence of the value of improved practices.

The following suggestions will help you plan and hold a successful tour or field trip.

1. Decide exactly what you wish to accomplish. This will be determined by the tour audience, their interests, levels of understanding and your evaluation of their needs.

2. Work out a detailed plan for the tour well in advance. This should include sequence of subjects to be studied, sites to be visited, a time schedule for the stops which permits plenty of opportunity for questions and discussion, tour guides and hosts, special audio-visual equipment if needed, transportation if needed and other details.

3. Go through a rehearsal or 'dry run' of the entire program well in advance. This will aid you in determining if you have budgeted enough time at the different stops and especially in seeing if you have too many stops scheduled. It also will give you a chance to scout the route to see if there are obstacles either to walking or to vehicle traffic.

4. On the day of the tour, keep the party together and keep them moving briskly from point to point. Nothing kills interest faster than stragglers. Make the party as comfortable as possible, taking advantage of shade for tour stops and providing plenty of drinking water. If the tour is longer than just a few hours, your plan should include providing the party with a generous serving of appetizing food.

In general, smaller groups are preferred to larger groups. This is because smaller groups permit more thorough discussion and are not as difficult to control and move about. The maximum number of persons any one tour leader should attempt to manage is 100.

Small portable loudspeakers can be a tremendous aid in keeping the attention of the group, increasing the amount of information imparted to them and in controlling them. Explanations usually are more effective when made by the demonstrator-farmer or by farmers using the practices being studied. The extension worker should be prepared however to provide technical, background, or interpretive information that may be necessary.

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[1] Using Visuals in Agricultural Extension Programs - ESC-561 International Cooperation Administration and Federal Extension Service, U.S. Dept. of Agric. pp. 25-26.

Demonstrations and tours may seem time consuming and in some instances costly, but they present the case in such a clear and obvious way that the audience can hardly miss the message. Considering their heavy educational impact on each individual, they may actually be among the most efficient and economical methods of teaching you can use.

Group discussion [1] Discussion is the process by which two or more persons pool their knowledge and feelings, and through mutual agreement clarify the issues under consideration. The leader of the discussion group serves as a master of ceremonies rather than as a resource person. He should see that everyone has a chance to be heard, keep the topics moving in an orderly way, and discourage persons who seem determined to dominate, including himself.

There are several distinct types of group discussion meetings. The newest idea is called a 'brain trust' in which questions are posed and the participating 'brains' express their opinions and views. Actually this is quite similar to panel and symposium discussions. The panel is usually a rather informal discussion by several 'experts' to consider a major topic, while a symposium is characterized by having several speakers, each of whom gives a rather detailed and usually prepared presentation of his views. Sometimes the symposium speakers are given a chance to answer one or more of the others in a form of rebuttal.

Extension Schools - Schools are designed to give the participants knowledge and skill in some specific line of subject matter such as irrigation methods, dress making or gardening. Schools involve intensive training over a specific period of time, such as one to four days. They may require pre-enrollment and an obligation to attend all sessions.

Schools offer an opportunity for presentation of much information in a short time to a select group of people with special interest in the subject. They must be well organized with specific teaching objectives and employ teaching methods which will hold the interest of participants. Demonstrations, discussions and the use of visuals add much to their effectiveness. Periodic and terminal evaluations help to keep the program realistic and provide guidance in conducting future schools.

Farmer Training Center - Farmer training centers have been used effectively in a number of developing countries to train farmers and their wives in concepts and practices of modern agriculture and home making. Centers in Kenya and Uganda consisted of dormitories for from 20 to 100 people, dining and laundry facilities and a farm varying from 50 to 400 acres, complete with equipment and livestock. Courses were attended by both men and women and lasted from two days to four weeks depending upon the subject involved. The primary object of a center is to show those who attend how farming can be carried out at a profit, to instill in farmers a desire to convert their own farms into profitable enterprizes, and to teach them some of the skills involved. In addition a large number of intensive short courses are held to give selected groups of farmers and farm women training in such areas as coffee production, tea production, clean milk production and the use of home produced foods in the diet. Men and women are trained separately, although often in the same subjects, because of problems arising from the presence of younger children and for other reasons. Both theoretical and practical training are included in the program.

Leadership training appears to be the most effective role of farmer training centers. To fulfill this role, training center programs must be integrated with extension programs to the extent that:

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[1] S.K. Taiwo Williams and John M. Fenley - Communication in Extension as Developed for Western Nigeria - Ministry of Agriculture and Natural Resources, Government of Western Nigeria p. 27.

1. Subjects of training contribute to the educational objectives included in the extension program.
2. Participants are selected on the basis of their leadership potential and through recommended leader recruitment processes, and
3. Returned participants are utilized in planning and executing extension programs.

Tips on Speaking - Speaking is the most frequently used tool of the extension worker. Every worker should know how to speak effectively. We speak so frequently that we get careless in what we say and how we say it. The following suggestions will help you become a better speaker; 1/

1. Have something to say of interest to the audience, direct your talk to those interests, not your own, find out in advance what kind of audience you are to speak to and what they want to know.
2. Have a series of specific points to follow. Tell the audience in advance what you are going to do. This lets them know where you are in your talk, and when the end is to come.
3. Think through in advance what you want the group to go away with from your meeting. Be sure that what you have to tell them will benefit them.
4. Don't apologize for your shortcomings and limitations. They will find them out soon enough. Don't belittle the introduction you were given by the chairman or local leader who introduced you. He probably got the facts about your background from you.
5. Talk 'to' the audience, not 'at' them. Look them in the eye, not out the window or at the ceiling.
6. Be confident that you can do a good job. This necessitates proper and careful preparation. Don't worry about being nervous as it is usual with speakers and is a necessary part of the process of looking and speaking our best.
7. Speak naturally in a loud clear voice, but don't shout. Don't use a lot of unnatural gestures, they will probably look foolish and pointless to the audience. Just be yourself.
8. Observe the faces of people in your audience to indicate interest, approval, disapproval, lack of interest, and drowsiness. People's facial expressions are the best guide for the speaker to guage success, semi-success, or failure in his talks.
9. Illustrate your talk with as many personal examples as possible, but don't be a gossip, and don't overdo yourself as an example.
10. Never memorize a speech. It is only a little better to read it, as it is more boring. It is preferable to use small cards in the hand and refer to them to refresh your memory. If it is possible, it will add a great deal to your talk if you use slides or flip-charts. These show you as well as

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1/ S.K. Taiwo Williams and John M. Fenley - Communication in Extension as Developed for Western Nigeria - Ministry of Agriculture and Natural Resources, Government of Western Nigeria pp. 29 - 31.

your audience what you are talking about. They will serve as your outline. Never use a single sheet of thin paper for your notes. It will crinkle and rustle and add to your nervousness.

11. Rehearse or go over the talk to yourself.

12. Try to relax the group at first. Some extension workers can do this with stories or interesting anecdotes. Be careful with these as it is the rare person who can deliver a story successfully. Nothing is less humourous than a supposedly funny story poorly told; it will generally fall flat. Personally, I accentuate what we're going to cover in the time allotted to my talk as a way of relaxing the group, and make sure that everyone can see and hear. If some persons are standing in the rear and there are seats in front, ask them to occupy them. After this relaxing act, the whole audience will generally settle down ready for the talk.

13. Don't talk down to an audience. People are smarter than we give them credit for. At least they're smart enough to want to hear us speak.

14. Dress appropriately for the occasion. Don't be a dandy out in the field, and don't come dressed for the field at a meeting with the tribal or village council.

15. Never play down a member of the audience, you do yourself more damage than the one you're trying to hurt. This is especially important to remember when questions are being asked. Try to be courteous when someone asks a question you have just finished answering. Try not to get angry or provoked, or if you do, try not to show it.

16. If you prefer to have questions at the end rather than during your talk, let the audience know about it. They will not interrupt you and can be thinking of questions they will want to ask at the end. It can be embarrassing to a speaker to ask for questions and not get any. Repeating your invitation only makes you look weaker. I prefer to ask, "Now, who has the first question?" Usually several hands will go up, and with them the interest of the audience. In big gatherings or where time may not permit questions, you may suggest that people come afterward and you'd be happy to speak with them.

17. In asking the audience a question, ask it first to the whole group. This causes everyone to listen and start thinking about it. If you ask a question to one person, everyone will be more interested to see how he gets off the hook than what the question is about.

18. Stop the questions before they run down or get to wandering. My favorite way is to say, "There is time for just one more question," which allows me to close the discussion.

19. Try to be as brief as possible without actually leaving out valuable points. Better to stop while the audience's interest is high than to keep on until they're restless and bored.

20. Be careful with the summary at the end of your talk. Try to hit only the major topics discussed, not a complete review. If you bore the audience with a long detailed summary, taking 7 to 8 minutes to outline what you said in the previous hour, your audience will wonder why you took the hour.

21. Hand out any printed or cyclostyled materials at the end of your talk. Nothing is more distracting than to have your audience rustling and reading the papers you just gave them while you're trying to talk to them. If you do need to give out materials, stop your talk and concentrate on getting a copy to everyone, then have them go through it or to a specific point for which you passed it out. Then ask them to put the paper away and resume your talk.

22. Avoid distracting mannerisms. Don't fidget. Don't fumble with keys, or coins, or keep tossing a piece of chalk up and down in your hand. These things annoy people and detract from what you are telling them.

23. Be enthusiastic. Your enthusiasm will generate enthusiasm in the audience.

24. Take every opportunity to speak. Practice makes perfection.

Mass Methods [1]

Personal and group methods can not reach everyone who wants and needs information. So mass methods - radio, newspapers, magazines, posters, exhibits and printed materials - are used to reach large numbers of people quickly.

These methods are particularly useful in making large number of people aware of new ideas and practices or alerting them to sudden emergencies. While the amount of detailed information is limited that can be transmitted through mass media, they will serve an important and valuable function in stimulating farmers' interest in new ideas. Once made aware or stimulated through mass media, farmers will seek additional information from neighbors, friends, extension workers and progressive farmers in the area.

Posters - A poster is a sheet of paper or cardboard with an illustration and usually a few simple words. It is designed to catch the attention of the passerby, impress on him a fact or an idea and stimulate him to support an idea, get more information or take some kind of action.

People do not walk around studying posters. They look at posters the same way as they look at other objects - trees, birds, houses, cows, other persons. Usually a brief glance is as much as the average person gives an ordinary object - long enough only to identify it. If something about the object catches his attention or stimulates his interest, the passerby will look at it longer. The design and use of posters as visuals in extension teaching are based on this principle.

Since a single glance may be all your poster will get, the message must be simple and clear. Details and wordy sentences have no place. Here are a few suggestions that will help you design more effective posters.

1. Decide exactly who your audience is. Decide exactly what you want to tell them. Decide what you want them to do.

2. Put down on a sheet of paper words and rough pictures that express your message simply and clearly.

3. Try to put your message into a few words - a concise, striking slogan. Visualize or put into picture form the most important central idea in the message.

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[1] Using Visuals in Agricultural Extension Programs - ESC-561 International Cooperation Administration and Federal Extension Service, U.S. Dept. of Agric. pp. 20, 44 - 46.

Remember that words and picture must be seen in a glance and must stimulate response by the viewer.

4. Rough out your poster in small scale - 1/8 or 1/4 actual size. If you have available the services of an artist, he can produce an excellent finished poster from your original rough sketch.

Other suggestions for attractive effective posters are these. Use plain, bold lettering and lines. Use color to attract attention and for contrast. Remember however that too many colors add confusion. Allow plenty of space. Do not crowd letters, words or illustrations.

Posters should supplement - not replace - other communication methods. They are often used to 'spearhead' or introduce a campaign. Or they may be used to reinforce an educational effort after it has been launched. In general, the greater the number of posters used in an area, the greater the impact - up to a certain point. Discretion and good taste will suggest the number to use. Most people find it annoying to be bombarded at every turn by the same poster message. Over-use of posters defeats their purpose and may actually turn people against the idea you want them to accept.

Posters may be produced in quantity by letterpress, by offset printing or by silk screen. Where only a small number are required, they may be produced by the individual himself, by an artist or by other persons such as school children.

Posters are put up on walls of buildings, fences, trees, poles, bulletin boards, store windows, trucks and automobiles and other places where they are likely to be seen by people passing by.

Exhibits and Displays [1] - Exhibits and displays have some of the same characteristics as posters, covered in the preceding section. The main differences are that exhibits and displays usually are larger and more detailed.

As with the poster, the job of the exhibit or display is to catch the attention of the passerby, impress on him a fact or an idea, stimulate his interest in the subject matter presented and possibly urge him to take some sort of action. Differing from a poster however, the exhibit is larger, may have three dimensions and most important - imparts more detailed information than is possible with a poster.

Because of their larger size and because they usually are placed in the market place or other areas where people move slowly, exhibits and displays attract and hold attention for longer periods than posters. Even so, the periods are not long. The viewing time will depend on whether the exhibit is in an open area or in a separate enclosed room.

Viewing time may be as short as one minute or as long as ten minutes. On the average, one should aim at telling the complete story in about three minutes. This means that whatever you can do to increase the attention-getting power of your exhibit, increase its attractiveness and personal appeal and keep its content simple and clear, the greater are the chances that the viewer will receive and understand your message.

Again, as is true of all other visuals, planning is the first step in preparing exhibits and displays. Decide who the audience is, what the message is, what you want the audience to do. Answering these questions will help you plan the scope of the exhibit, the appeal to use and the content.

1/ Using Visuals in Agricultural Extension Programs - ESC- 561 International Cooperation Administration and Federal Extension Service, U.S. Dept. of Agric. pp. 46 - 48.

The most effective exhibits are built around a single idea with a minimum of supporting information. In a few simple words and pictures, tell farmers that a new seed variety is better and why - that's all. Make a miniature of your exhibit from paper or cardboard. This will help you see how it will look in full scale. Experiment with colors and design. Get an artist to help you plan the arrangement if one is available.

To attract attention and get people to stop and look at your exhibit, include something that will catch the eye. This might be a live object such as a sheep in an exhibit about sheep. Or it might be color, movement, light or any number of things you can think of by using your imagination.

One could try to define the 'something' that causes persons to stop and look for more detailed information. This 'something' must produce a 'mental shock'. Once the person stops moving in front of an exhibit he (or she) is susceptible to the rest of the message or messages in the exhibit. Incidentally a walking person passes by an exhibit in about the same number of seconds as there are lineal feet in front of the booth. In other words if the booth is ten feet (3 meters) wide in front, a person has about ten seconds to comprehend the message intended. Thus it is obvious that one's attention must be attracted in a very short time.

In your exhibit, make the central idea stand out. The lesson taught must be clear at once. A combination of real objects, models or illustrative material plus a bold sign usually will get the point across.

Include appeal that will identify the subject matter with the viewer's own interests, experiences, needs. Make your exhibit say: "Here is something for YOU; here is an answer to YOUR problem; here is how YOU can make more money with YOUR dairy herd."

Once you have attracted the viewer's attention, interested him in the central idea and convinced him that the idea is important to him, you still have the job of presenting the supporting information - usually the 'why' or the 'how',

Use 'before' and 'after' photographs with captions; use actual objects; contrasts - old vs. new, etc. - use models, drawings, actual demonstrations; use projected visuals, specimens. Use whatever you can find or devise to tell the story concisely, clearly and convincingly.

Here are some general suggestions that will help you prepare more effective exhibits and displays:

1. Clutter is the worst enemy of an exhibit. The fewer elements in your exhibit or display, the better.

2. Keep written material to a minimum. Use only enough captions and signs to tell the story. Vary the size, style and color of signs and lettering to create interest and direct attention to the center of interest.

3. Use a color scheme of not more than two or three colors with neutral shades for backgrounds and spots of intense color for emphasis.

4. Place the center of interest near eye level. This is approximately five feet. Things above seven feet or below three feet won't be seen as well as they would be closer to eye level.

By securing the cooperation of villagers in producing a few basic items of visual equipment to be kept permanently in the village, extension workers can constantly use good visual teaching methods, yet save themselves the difficult work of carrying heavy equipment about.

Newspapers provide a valuable channel for transmission of educational information where they exist and where rural people receive and read them. Even among illiterate people there are usually a few who can read and pass on interesting bits of information to their friends.

Newspapers print news and news consists of items of broad interest to their readers. Newspaper space is valuable and limited. Your news item must compete for attention with other items as well as advertizing and the editor is the sole judge of its news value.

All material for the press should be factual, well written and intelligently planned. Otherwise it will probably be discarded by the editor. A good rule is to find out what the editor wants and give it to him the way he wants it. The ingredients of a news story are who? what? where? when? and sometimes why? These ingredients should be covered in the first sentence or two and elaborated in later paragraphs. Then, if the editor feels he must cut off the item for lack of space the main facts are there. Most editors prefer items of one double-space typewritten page or less.

Editors like stories of individual accomplishment. Use names of local people but be careful not to reveal personal information that would embarrass them. As a rule, editors like news items that tell what people do. But some local papers have special columns for timely information and material such as how to spray fruit trees; recommended varieties of garden vegetables etc.

Write simply, using short sentences and paragraphs that are easy to read. Remember that you must catch the reader's attention in the first sentence or he is unlikely to read further. The succeeding facts should be put down in the order of their importance. The ABC's of good writing are accuracy, brevity and clarity.

In general, try to personalize the news and appeal to the desires of people to improve incomes, homes and the community.

If you tell the facts to a reporter and he writes the story, give him the general facts and let him ask questions for the amount of detail he wants. Don't bore with minor details unless he asks for them. If the story he writes is inaccurate, perhaps you failed to give him the correct information. Don't complain to his superior if you want future publicity but discuss it with the reporter at the first opportunity.

Wall Newspapers 1/ are similar in size and appearance to posters. They are different in that wall newspapers usually attempt to communicate more than one fact or idea. They also have more illustrations and written material.

Wall newspapers have been used for a considerable time in rural areas to communicate news of political and social interest. Because they are basically pictorial, drawings and/or photographs are their trademark. The text is as brief and vivid as possible.

Agricultural extension services in many countries have adapted the wall newspaper to educational programs and it has become one of the most effective extension teaching tools. It is used not only to communicate news of extension activities but also to report results of research and to recommend new practices. A typical extension wall newspaper might therefore contain pictures and text:

- Announcing the appointment of a new livestock specialist.

- Giving a progress report on a current fertilizer campaign.

1/ Using Visuals in Agricultural Extension Programs - ESC-561 International Cooperation Administration and Federal Extension Service, U.S. Dept. of Agric. p. 49.

- Urging the use of vaccine to prevent fowl cholera in poultry flocks.

- Reporting the results of experiments with new grain varieties.

In most countries where wall newspapers are used in extension programs, they are produced in quantity by a central office and distributed by mail or through the extension organization. Some wall newspapers are printed by letter-press. Offset duplicators offer greater flexibility in permitting the paper to be printed in local languages or dialects. Drawings and color are easily included with offset duplication.

Distribution varies according to the requirements of each country. Mailings may be made directly to village headmen, school teachers, mayors or other leaders. Local extension workers may deliver or even post papers in villages he visits.

Walls of buildings at busy intersections are excellent places to post the papers. They may also be posted on village bulletin boards, in reading centers, at schools, inside public buildings and many other places.

Folders, Leaflets and Pamphlets [1] - Simple folders, leaflets and pamphlets can be used in many ways in extension programs. They may be used singly for example, to explain the advantages of testing soil. They may be used in series of broader subjects like swine raising, with separate leaflets on feeding, housing and breeding. They may be used as reminders of when to plant crops or what chemicals to use to control different insects.

Folders, leaflets and pamphlets may be used in coordination with other visuals in long-range campaigns. Because of their low cost, they can be given away at meetings and fairs and offered on radio programs. They are useful to supplement larger publications when new information is available and when reprinting the whole publication is not practical.

Besides the advantages of low cost and short preparation time, folders, leaflets and pamphlets take less time to get their message across. Their smaller size makes it necessary for the author to eliminate non-essentials from his message.

When preparing these materials, keep your audience constantly in mind. Write with words people understand. Write about things that interest people. Change your method of presentation as you write to young people, farmers, women. Eliminate difficult scientific and technical terms.

The importance of illustrations cannot be over-emphasized. Even where literacy is not a problem, people interpret words differently because of differences in past experience.

Almost every extension service over-estimates the ability of its audience to read a printed message and understand it clearly. Almost every extension service over-estimates the extent to which people will be attracted to and read a printed message.

Illustrations reduce the risk of misunderstandings; help make your message clear and more attractive; increase learning.

Good layout arranges material in a logical, easy-to-follow manner and makes it attractive to the reader.

1/ Using Visuals in Agricultural Extension Programs - ESC-561 International Cooperation Administration and Federal Extension Service, U.S. Dept. of Agric. pp. 55 - 56.

Realistic illustrations usually are the most effective in extension work, although humorous drawings have a definite place. Use humor carefully so as not to offend anyone. Good pictures make any publication easier to understand and more interesting to read. Crop unnecessary details out of photos. Keep drawing simple.

Folders generally have more appeal when a color of ink is used other than black. Choose colors that are legible as well as appropriate - dark green ink for pastures, dark brown for soils. Two or more colors can be used if the extra cost is justified. Colored papers can also be used for interesting effects and are available at small extra cost.

Attractive, effective publications can be prepared on spirit duplicators, mimeograph machines, offset duplicators or letterpress. It is not difficult to train an artist to produce illustrations, headings or even copy in local dialect for each of these methods of printing.

Recognize that the cover of illustrated literature has a function differing from the pages within. The cover should be attractive, colorful and impelling. The audience should feel an urge to look inside. A bulletin that never reaches the hands can't possibly reach the brain where judgments and decisions are made.

Fact Sheets [1] are 'boiled down' treatments of subject matter. They usually cover a single topic and often they are limited to a single page.

Most fact sheets are illustrated with drawings or photographs or both. The illustrations are used to show details, steps in a process or to otherwise make the information clearer and more understandable. One of the important uses for fact sheets is to provide current subject matter to field workers. Field workers frequently complain that needed technical information is slow in reaching them. Much agricultural information is put up in technical bulletins and other lengthy publications. These take considerable time to process and distribute.

On the other hand, the essential facts can be put down and combined with drawings and/or photographs to make an effective capsule summary which can be reproduced quickly and inexpensively in fact sheet form. This puts current information into the hands of local extension workers enabling them to give better service to farm families.

Extension administrators who are concerned with the problem of speeding up intra-staff communication of subject matter should study the advantages offered by fact sheets.

Projected Visuals [1] - motion pictures, slides, film strips and other forms - have much appeal and are among the most effective of the visual teaching aids. It is well to remember that they have important limitations as well as advantages.

The main advantages of each type of projected visual are discussed in the sections that follow. In general, the disadvantages or limitations are similar - special equipment is required both to produce and show the visuals. This equipment tends to be relatively expensive. Some sort of power is required to operate the projectors. Transportation, maintenance and storage of equipment and materials require special consideration.

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[1] Using Visuals in Agricultural Extension Programs - ESC-561 International Cooperation Administration and Federal Extension Service, U.S. Dept. of Agric. p. 56 and pp. 62 - 65.

If these limitations do not present a problem in your situation, you will do well to make as much use as possible of projected visuals in your extension program.

Motion pictures are really not 'motion' pictures at all. They are a series of still pictures on a long strip of film. Each picture is flashed momentarily on the screen and the rapid succession of still pictures - each of which shows the subject in a slightly different position - gives an illusion of movement. The main thing to realize is that motion pictures can be tremendously effective in helping you do a job of teaching.

Films have the potential to create powerful emotions and urges. This means that selected and used properly, they can intensify the interest of your audience in the subject you are teaching. Films are excellent also for showing the steps necessary in doing a task or for showing a continuous action.

They can reproduce events long since past. They can record a demonstration that can be given over and over again to many different people in many different places. They can slow or accelerate motion for better analysis of action and growth. They can magnify action on a screen that normally would be too small to be seen easily or clearly by an individual or group. They can condense or stretch time.

Many other strong points for using motion pictures could be mentioned but the reasons already given are among the most important and help explain why films are a potent teaching tool. For motivating an audience, for appealing to the emotions, for a clear concise portrayal of action, few media approach the motion picture. It portrays reality.

The size of film most commonly used for educational motion pictures is 16 mm. All 16 mm. films are not alike however. Those made for viewing silently or with comments by a leader are made with sprocket holes on both sides of the film.

Films made by professional laboratories to which sound is added have sprocket holes only on one side of the film. You should not attempt to project sound film on a silent projector therefore because the teeth of the drive mechanism will punch holes in the sound track.

Another difference is that silent films are made to operate at 16 frames per second or somewhat slower than sound film which runs at 24 frames per second. If a silent film is run at the speed for sound, a decided increase in the speed of action will take place.

In selecting a film to use in a given teaching situation, you must exercise the same judgment you would in selecting other teaching aids and materials. In addition to your objective, you must consider the previous experience of the audience along with such considerations as age, education, interests and customs.

A film should be used only as a teaching aid. Leaders frequently make the mistake of showing a film without preparing the audience or following up. Because movies sometimes cover too much ground or include too much detail, considering the experience of the audience, viewers often fail to understand ideas presented.

To do the best kind of a job, the leader first must be thoroughly familiar with the subject he plans to teach. He must know exactly how the film supports the ideas he wants to get across. Before he shows the film, he should explain the lesson, tell why it is important and stimulate viewers to look for certain things in the film. When this procedure is followed, the end of the film is the signal for the beginning of a lively discussion and question period.

A successful film showing depends on looking after a number of details. You will need an adequate power supply that matches the requirements of the projector. This means checking on details such as extension cords and electrical connections. Some means should be available to darken the room without cutting off ventilation. Spare projection lamps should be on hand.

Before the audience arrives, the machine should be set up, threaded with film, focused on the screen and tested. The projector should be high enough to project over the heads of the audience and the screen high enough from the floor for all to easily see the bottom of the picture. A good rule is 4 feet (1.2 m.) from the floor to the bottom of the screen.

Lantern Slides - The lantern slide is one of the most popular and versatile visuals in extension education.

Reasons for the popularity of lantern slides are:

- They can be made by the individual worker at low cost.
- They can be made either in natural color or in black and white.
- Both the slides and the projection equipment are relatively light and can be easily transported.
- Slide sequences can be readily changed to keep them timely and localized.
- Slide sequences can be changed in length to fit local needs.

Slides have these limitations:

- They do not show action.
- They normally require 'live' narration unless synchronized with a tape recorder.
- They require close cooperation with a projectionist throughout the presentation if the speaker desires to be in front of his audience.

The most popular type of lantern slide in use today is made on 35 mm film. When color film is used, a direct color positive transparency is the result. Some types of this film can be home-processed. Others require commercial processing. When commercially processed, the film is cut into individual pictures and placed in cardboard or glass mounts ready for projecting. These are called 2" x 2" slides since the mounts are 2 inches square.

Radio is one of the fastest, most powerful and in many countries the only way of communicating with the masses of rural people. It reaches people of all cultural levels who understand the language of transmission. Research has shown that people believe what they hear.

Mass media, including radio, rank at the top in the awareness and interest stages of learning. Radio is most effective when people are just becoming aware of the idea. Although useful, it is not as effective at the evaluation, trial and adoption stages. Having people's friends and neighbors appear on the radio increases radio's influence in these latter stages of learning. If there is a choice, the early adopters or informal leaders should be interviewed rather than innovators.

Good interviews must be planned. Talk over the interview with the person before you go on the air. Start the program by introducing your guest, tell where he is from and his purpose for being on the program. Tell him to talk in terms of his personal experience using the personal pronouns like "I", "My" and "We".

An advantage of radio programs is that they can be done almost anywhere through the use of a tape recorder. Doing them in the home or on the farm gives them greater authenticity.

Radio is useful in reporting spot news, such as announcement of meetings; for warnings about insect outbreaks, and especially as a part of campaigns. Extension workers may supply stations with spot announcements to be taped and repeated at intervals during the day. Longer programs should be either presented in person or taped for use on scheduled programs.

Listening habits may vary according to the society involved. Studies of listening habits will tell the extension worker when his listeners are likely to be men and when women and at what hours they listen most. Take these factors into account when planning your program.

Scripts prepared in the central extension office can contain valuable technical material and are time savers for the local extension worker but he needs to localize and personalize them. Relating them to the experience of local people helps.

Advertize your programs in advance by telling the subject of the next program and whom you will interview.

Not all extension information is good radio material. It should generally have appeal to a wide range of the listening audience. Details on how to do a practice are not suited to radio communication. But most important, the broadcast should contribute to the planned extension program.

Start the program with a statement that arouses the listeners attention. The first ten seconds are the most important. Then follow through with a well organized, smooth flowing presentation, repeating the key points again at the end. Few people remember a single statement of a fact.

Television adds a second dimension to radio broadcasting thus increasing the scope of methods available to the extension worker. He can demonstrate as well as talk. The Home Economist can demonstrate 'how to make a dress'. The agricultural extension agent can present useful method demonstrations as well as show a whole series of result demonstrations through pictures thus emphasizing difference over time. All types of visual aids such as charts, graphs, live objects, chalk boards can be used to increase teaching effectiveness.

Television programs require meticulous preparation. Every piece of equipment must be in place and the dialogue must be well thought out.

Organization is an essential ingredient of a television program. It is a sequence of related words and pictures that make up the story and is called a 'run down sheet' of two columns, one headed 'video' for pictures, the other 'audio' an outline of what is to be said. The run down sheet is not a script but an outline to guide the television crew as well as the performers.

Start with easy to present programs with the action in one place. Then test out your ability to perform more involved sequences as you gain experience.

The basic rules are simple. Move deliberately to allow the camera to follow. Operate within a small area. Hold material steadily on target for camera viewing. Avoid the use of complicated demonstration material. Time your presentation before going to the studio to make sure the program fits into the allotted time. Have some extra points ready to present in case the material runs short.

Color combinations and light contrasts are important. Your television engineer can tell you what combinations are best. Follow his advice.

In spite of the relatively high cost of receiving sets, television occupies an increasingly important role in developing countries. Many governments have installed sets in each village so villagers can receive official broadcasts. Extension administrators have only to convince authorities of the value of educational broadcasts to open up this useful channel of communication and education to the masses of people.

Educational Campaigns in Extension Work [1]

Every family in one Iranian village grew at least a few pistachio trees. Each year, soon after the nuts formed on the trees, insects attacked and most of the nuts dried up. The yield was low, yet this was an important source of income to the villagers. The people watched this happen each year with concern and disappointment. The difference between a good crop and a poor one meant having enough to eat all year or empty stomachs part of the time.

The agricultural advisors knew that one spraying each year would control the insects, so they used an educational campaign to bring this about. They knew that success for one year might leave some farmers saying that it just happened to be a good year. They decided the campaign must last through two growing seasons.

Extension advisors and specialists planned the campaign carefully. They kept Ministry of Agriculture officials informed on all developments. They discussed plans with the chief of the village, the religious leader, and other leaders. When it was time to start the campaign everyone was ready. The Governor came and talked to the people about spraying the trees. Extension advisors held many meetings to explain the value of spraying, to show the insects, and explain the procedure for controlling them. They visited farmers individually to be sure they understood. They put posters everywhere as constant reminders.

The Ministry of Agriculture made the spray available at low cost. Men were trained to handle the simple spray equipment.

Each farmer was to leave one or two trees unsprayed so he could compare results. When the time was right the trees were sprayed. The nuts did not dry up as in other years and at harvest time the people picked a good crop.

The extension advisors held follow-up meetings after the spraying and after harvest because people still had questions. They also had to make plans for the next year. During the second year, there was no letup in meetings, farm visits, posters and exhibits. Agents still concentrated on the one practice - spraying. But after two seasons of bumper crops, the people were convinced of the value of spraying their pistachio trees.

This is an example of the way a good educational campaign is run. Let's examine some of the elements that made this and other campaigns work well.

What is an Educational Campaign?

An educational campaign is a well-organized plan for bringing about widespread adoption of a particular practice. It is a continued teaching effort concentrated into a set period of time. The central idea - a better practice - is kept before the people constantly during that time. People are shown repeatedly that this is a solution to a problem.

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[1] Helen A. Strow . Educational Campaigns in Extension Work - OIE 24 Federal Extension Service, U.S. Dept. of Agriculture in cooperation with the Agency for International Development, Washington, D.C. pp. 6 - 10.

The more often people are exposed to a new idea, the more likely they are to adopt it. Campaigns use this principle. In a campaign, people have their attention focused on a new practice through many methods. They become interested because they see reminders often. This dramatizes the problem.

When the campaign works well and people accept the practice, you, the extension worker, can leave that practice to them and concentrate your efforts on teaching other practices.

How should you use a Campaign?

Not all problems are adapted to the use of a campaign. To decide which problem to select for the campaign treatment, consider these points:

To be successful, a campaign must

- Be directed toward the solution of a problem the people recognize.
- Deal with a problem important to a large number of people.
- Offer a solution that the people can and will accept.
- Emphasize one idea at a time.

A campaign must be directed toward the solution of a problem the people recognize

People must first feel the need for a change. A campaign directs their attention toward solutions to problems they already recognize.

The government of Jamaica, for instance, conducted a 'better rice' campaign when farmers became aware that they could not grow enough rice to feed their families and have some to sell. The campaigns introduced a new variety of rice that solved the problem. The farmers could accept this solution.

A campaign to build smokeless stoves started in one village because women complained that their eyes hurt from the smoke of the old three-stone cooking arrangement. A child who fell into one of these open stoves and was badly burned dramatized the need for a safer cooking arrangement. The women recognized a problem to be solved.

The problem to be solved by your campaign must be one that is important to a large number of people. To justify the time and effort you put into a campaign, only important problems should be considered. Because a campaign is an intense effort, for a limited time, and uses a variety of methods, it reaches many people. It would not be the best use of your time to concentrate such effort on a small audience.

In an anti-malaria program, for instance, where all the houses in an area must be sprayed with DDT, all the people must be reached. In the pistachio campaign, most of the village families owned trees, so that most had to be reached.

The practice to be recommended in the campaign must be one that the people can and will accept. Although the people may recognize a problem that is important to many of them, they may not be able to carry out the practice you know would be the most effective. The recommended practice should fit into the facilities the people have, be in keeping with their ability, and be in harmony with their culture. For example do not recommend spreading of fertilizer by machinery when machinery is not available in the area.

A successful campaign can emphasize only one idea at a time. Most people learn only one thing at a time. A well-planned campaign does not present too much for them to learn. Thus, it does not demand too much change in their habits all at once. In the pistachio campaign, for instance, only one practice was recommended .... to spray the trees at the proper time. It could have confused the people if other practices, such as fertilizing, had been recommended at the same time.

With only one idea at a time, the learner will have time to try the new practices and experience success.

One campaign at a time is enough for the extension worker too. It takes a great deal of your time and effort to plan and carry out a campaign. A good one may take your continual supervision for several months.

Planning

In any campaign, you first plan, then carry out the campaign, then evaluate the results. Planning a good campaign takes time, but saves time later on. Careful planning helps insure success. Local leaders should be involved in the planning. You should:

1. Analyze the situation
2. Select the practice to promote
3. Set objectives
4. Plan for evaluation
5. Decide how to involve people
6. Schedule events
7. Arrange for equipment and supplies

Analyze the situation before you start a campaign, know the facts about the practice to be changed. Know exactly to whom you will direct the campaign. To get these facts, make a survey. This may mean visiting farms or homes, observing, and discussing with the people.

Get names of people who need the new practice. Opinions can be incorrect. For instance, a county extension agent estimated that 90% of the dairy bulls in his county were purebred. He did not think a campaign was necessary. He made a farm survey, however, that showed only 20% were purebred.

In another case the main emphasis in a nutrition program was to be placed on fruits and vegetables. A survey showed these were not lacking in the diet of the average adult but that there was great need for milk.

Select the practice to promote - After a careful study, you may find many things need to be done. However, you must select one practice to be given priority in the campaign.

A campaign teaches practices rather than principles. These practices represent the answers to needs felt by a large number of people.

As an agricultural advisor visits farmers he may see their need to improve care of poultry or use a better variety of rice seed. The home economics advisor may want to help families build smokeless stoves, improve floors, or plant gardens. Your survey will show what people are interested in. This will point to the practice to select for your educational campaign.

Set Objectives - Once you decide that a practice warrants a campaign, establish clear-cut objectives. Decide exactly what change you expect to be made and who is to make the change. For example, in the pistachio campaign the objectives were for all pistachio growers in the area to:

1. Learn why spraying is necessary for production of pistachio nuts
2. Learn how to spray pistachio trees
3. Spray trees

Plan for Evaluation - As you plan the campaign, also plan how you will evaluate it in terms of the objectives you set. Plan regular times and specific methods for checking on progress. Evaluation should be a continuous process. The main job of evaluation, however, comes after the campaign has ended. Even then the results may not show. It often takes time to change practices. Evaluation helps you judge how well a campaign worked but it also can yield information that will help in conducting future campaigns.

Decide how to involve people - In planning, list all the different kinds of people who should be informed and involved in your campaign, and plan what their part will be. The people concerned must be involved all the way - in the planning, in the activities of the campaign, in evaluating results, and in publicizing success.

Ministry officials need to be involved so that they understand fully, so they lend support, and provide financial assistance if needed.

Leaders in the community, such as religious leaders and tribal chiefs, must be included.

In the pistachio campaign, all the people who might lend support, or hinder progress, or have personal concern in the campaign were involved from the first.

Schedule Events - Write down a plan of events before you start the campaign. Such a plan should:

1. Be detailed and specific.
2. Give you a calendar and work chart which helps you systematize work.
3. Assure continuity of teaching effort.
4. Bring in appropriate leaders and technicians at the right time.

In a town in Venezuela, the people decided to carry on a 'clean-up' campaign. This was their first community project. They selected leaders and organized committees to carry out the campaign. The leaders divided the town into sections and each leader called on every family in his block to explain what they could do. The school was involved and the children made trash cans. The church and the merchants contributed their share. Everyone raked and piled up the trash in their yards. The Central Committee secured trucks for one day to collect the trash. It was truly a community project.

In planning the campaign the Central Committee with the aid of the extension worker developed the plan and schedule of activities for the 'clean-up campaign' as follows:

	First Week	Second Week	Third Week	Fourth Week
Meeting	General meeting to launch campaign	Meeting of leaders to discuss progress Meeting in school yard to start school clean-up		Village—fiesta to discuss accomplishments.
Leaders	Block chairman call on families	Block chairman continue call on families		
Poster Contest	Start contest in schools	Judge posters and put half of posters up	Put up second half of posters	
Banner	Committee—put banner up across street			
Home Visits		Visit selected families to check progress	Continue to visit families to encourage whitewashing of houses	
Equipment	Arrange for trucks and barrels for trash and whitewash	Trucks haul away trash	Place trash cans in strategic places	

Arrange for equipment or supplies - The change recommended in the campaign may call for seeds, fertilizer, or other supplies or equipment not regularly available in the community. If this be the case be sure an adequate supply of all needed materials is on hand. You might, for example, arrange to bring seeds in from outside and plan a system for distributing them.

Conducting the Campaign

Launching your campaign - Open your campaign by doing something dramatic that focuses attention on the problem. You might hold a large meeting, inviting everyone interested. Perhaps you could have a prominent person take part in the program. The pistachio campaign was launched by the Governor. In other campaigns the Governor or chief has proclaimed a 'National Health Month', a 'Rural Youth Week', or 'Dairy Day'.

Involve any news media people you can. If radio is available, invite radio announcers to participate. If newspapers reach the community, be sure to include reporters and photographers. Help these people arrange for special photographs and news stories throughout the campaign.

You've started your campaign dramatically. Now you must keep the attention of the people focused on the recommended practices continuously. This is the place to use your imagination and devise unusual and interesting approaches.

Meetings - You will use meetings of all kinds to carry the message. Some meetings may center around the reasons for making the change; others may demonstrate how to make the change. Your message regarding the new practice may be injected into meetings held for other purposes, too.

Farm and Home visits - You will need to call on the people involved in the campaign to encourage them to judge their progress or to discover the things that interfere with their making the change and assist them. But you need not make all the visits yourself; you can train leaders to make many of these visits.

Tours - can show the results after a few people have tried the new method. Others may be interested in trying the practice when they see for themselves that it works. Tours were used in 'better homes' campaigns in Uganda. On these tours, not only the homes that had made the greatest improvement were visited but also those that had made only a small beginning.

Demonstrations - Before you start a campaign you may have to prove to people that the recommended practice will work. Demonstrations can do this.

In a state in India where wheat is grown, it was decided to introduce commercial fertilizer to increase production. Test plots were established all over the state to demonstrate this practice. It was only after the agricultural advisors were fully confident that people accepted the practice that they launched a campaign.

Publicity - Exhibits are a good way to show the value of the recommended practice. You can put exhibits in fairs and agricultural shows. Some exhibits can be displayed in markets and moved to different villages for the village market day.

Many kinds of contests have been used to arouse interest. In the Uganda 'better homes' campaigns a contest was the climax. The house-holder making greatest improvements won a prize, such as a lamp or bag of fertilizer.

Essay contests, poster contests, or slogan contests can draw attention to the campaign and its objectives.

Signs for homes using the recommended practice have helped. In one malaria campaign, the houses that were sprayed with DDT were plainly identified by special marking. In a 4-H membership drive, each new member may get a sign to put on his home.

Posters remind the people of the practice being recommended. In the clean up campaign in Jamaica, a poster was designed showing a parade and the title 'join the big clean-up march'.

Wall newspapers were used during a rat campaign in India with great success. Not everyone in the village was able to read the newspaper, but all wanted to know what it said. Those who could read, read it to the others.

Radio and television can help too, if the villages have receiving sets.

End the Campaign Dramatically

Set a definite time to end the campaign. Feature the final day so the people can share the satisfaction of completing the project. This is a good time to report results to the people. This day, like the starting day, is a time to invite an important person. Dinners, picnics, or rallies will encourage all the people who took part in the campaign to come and rejoice in its success. This is an occasion to recognize community leaders for their work.

Evaluate Results

Before trying to evaluate the results of a campaign, review the objectives and consider:

- What is to be measured?
- What changes were expected in knowledge, attitudes, and skills?
- What evidences can be noted that the changes were made?
- Who is carrying out the practice recommended in the campaign?

You can use a variety of means to collect information for evaluation from the people, such as personal interviews on farm and home visits, a show of hands at meetings, and through use of a questionnaire. Try to determine not only the number of families who adopted the recommended practice, but which campaign methods were most influential. Ask the leaders and members of the campaign committee for their opinions on the effectiveness of the campaign and for suggestions for improving future campaigns. Getting information, suggestions, and opinions from a variety of people will reveal flaws in planning and in carrying out the campaign that you can avoid in future campaigns.

Evaluation will be going on throughout a well-planned campaign, but final evaluation is necessary to provide adequate guides for future programs. A careful evaluation will show exactly how many people made the change recommended. It will provide the facts for reporting to the people. It will also show what you should emphasize in future programs.

Chapter 10.

EXTENSION PROGRAM DEVELOPMENT

Extension program development is a continuous series of processes which includes planning a program, preparing a plan of work and teaching plan, taking action to carry out the plans and determining and reporting accomplishments. It is an intensive and broad effort on the part of the extension service to assist the people of a county (or extension district) to analyze their major problems and to build an educational program directed toward the improvement of agriculture and family and community living. Program development is both an educational process and an attempt to do a thorough and systematic job of longer-range programing with the people.1/

Some Assumptions in Extension Programing 2/

The act of creating extension programs, regardless of their form, rests on a number of important assumptions.

1. That prevailing conditions of living and ways of making a living are not what they ought to be and that something different can and should prevail.

2. That it is possible to select, organize and administer certain resources of technology, personnel, teaching methods and physical facilities to help people achieve more desirable ways of living, and of making a living.

3. That people need the guidance of professional leaders possessing the knowledge and skills necessary to help them learn to solve their problems.

4. That change is necessary, that change is a pre-requisite to progress and that the status quo must be rejected, or at least modified, in favor of new ways of thinking and doing.

5. That people will continue their present ways of thinking and doing until they have new experiences that cause them to reject present modes of behavior and adopt new ones.

6. That to cause people to accept new modes of thinking and acting requires greater incentives to adopt recommended practices than are offered by continuing with present ones.

7. That progress is made only when someone has ideas about a better way and has the skill, courage and opportunity to try them out.

8. That progress requires change, but all change does not necessarily result in progress. It is change in specific, predetermined and desirable directions that results in progress.

9. That the most effective teaching and learning results from choice, not chance; from an intent to teach and learn under the most desirable conditions that can be created.

1/ J. Neil Raudabaugh - Guide lines for County Extension Program Development and Evaluation - Federal Extension Service, U.S. Department of Agriculture.

2/ J. Paul Leagans, Professor of Extension Education, Cornell University. Prepared for students in R.E. 224 Program Building in Extension Education.

10. That educational changes in people are pre-requisite to the attainment of other changes in a free society.

11. That the primary objectives of extension programing and teaching is to help each individual, each family and each community achieve the highest level of living that it is capable of, economically, socially, aesthetically and morally by means of aided self-help through education.

Some Characteristics of Extension Programs

Just as a school has its curriculum through which it accomplishes certain specific educational objectives, an extension service requires a definite and constructive program if it is to make its maximum contribution to rural progress. But an effective extension program differs considerably from a school curriculum.

1. It is practical and fills a need recognized by the people it is designed to serve. No compulsion is involved in its acceptance.

2. It is flexible to meet ever-changing conditions. It is comprehensive to meet the wide variety of needs of all rural groups.

3. It is well conceived to make a continuing contribution to rural development. It considers not only the immediate needs of the population but looks to the future. A program conceived only to meet immediate problems and emergencies frequently results in wasted effort because of changing conditions.

Probably every extension advisor has in mind certain objectives he hopes to achieve. He may consider these his program, but unless these objectives are known and accepted as theirs by the people he serves and with whom he works, he is working alone. Unless such objectives are defined, and recorded, and unless a program of action is developed, looking toward the accomplishment of these objectives, there is little progressive action from year to year or when changes in staff of the service occur.

The purpose of this chapter is to outline some basic principles and procedures of extension program planning that have been developed through many years of study. An extension program, as treated in this chapter, may be defined as a statement of objectives of an extension service, based upon an analysis of the existing situation and the needs of the people in the area involved. It includes a listing of problems that must be solved in accomplishing these objectives and of the proposed solutions .

Extension programs are implemented through plans of work in which broad objectives are broken down into specific jobs, with goals established for accomplishment through educational activities carried on over a definite period of time. As an example, an objective of a local extension service may be to increase the local supply of milk and other dairy products to meet minimum nutritional requirements. The plan of work for a given year may include as a goal the establishment of an artificial insemination center with a given number of milk producers making effective use of its services. The accomplishment of this goal will require educational activities on the need for more milk, profit to be expected by producers through greater production, dairy management practices which are necessary in connection with such services, and principles of administrative management of artificial insemination centers. Working relationships will also need to be established with other agencies concerned with the problem.

Extension program planning is a continuing process. Changing economic and social conditions, and new problems which are constantly arising, make changes necessary in emphasis although not in basic objectives. It is this constant change in agricultural and rural social conditions that makes a program of basic objectives so essential. Without it the extension worker is led into a maze of emergency activities and little progress is achieved.

Principles of Program Planning

A number of basic principles of extension program planning have been established in workshops on this subject. Let us examine these principles in some detail.

1. Base program planning upon careful analysis of factual situations. All of the relevant and available facts bearing upon the land, the people, the homes, the customs, the communities, the organizations, the institutions and the agencies operating in the area should be taken into consideration. Examine these facts in relation to the objectives of the organization. The results of previous plans should be summarized and appraised. Sources of factual material include research work applicable to the area, and problems under consideration; census reports; reports of planning commissions; surveys and studies of local conditions and the experience of participants in the planning process. Assemble this material by problems or subjects, and in a form facilitating the inclusion of additional information as it becomes available.

2. Select problems for action which concern recognized needs. Not all problems can be attacked at once. It is important that those of most urgent concern and widespread interest be given first consideration. To be effective, extension work must begin with the interests of the rural family and work toward consideration of other problems of equal importance which may not be recognized in the beginning. Complete factual information helps determine priority of problems.

3. Make the program comprehensive including problems of interest to all members of the rural family and to different socio-economic groups. The scope of extension programs varies in different countries. Work with young farmers and with farm women has been described previously. The interest and cooperation of farm workers and tenants is equally important. Unless extension contributes to the welfare of these groups it can not be fully effective in raising the level of living of the community. It has been the policy in some countries to cater for the needs of the more progressive farmers in the hope that others would follow their example. Small farmers have special problems, however, which make it difficult for them to adopt the same practices as their neighbors who have greater resources. Special adaptation is often needed to make certain practices applicable to the conditions of a small farm.

4. Keep the program flexible to meet long-term situations, short-term changes and special emergencies. Long-term projects, such as soil conservation and improvement of nutrition, are essential to rural progress, but these need to be combined with projects meeting more immediate needs of the population or interest will lag. Always make allowance for emergencies such as drought and floods, which require immediate action if suffering is to be minimized. Without flexibility the program may not in fact meet the needs of the people.

5. Make the program educational and direct it toward bringing about improvement in the ability of people to solve their own problems, individually and collectively. The program planning process is itself educational. Participation of rural people in gathering and analyzing fact, selecting problems for attention, assisting in carrying out agreed upon action and in evaluating results, develops their ability to meet new problems as they arise. It puts them in contact with sources of information, and increases their ability to utilize the service of agencies working on their behalf.

6. Use democratic methods in developing the extension program, by arranging participation of lay people, the extension staff and others who can contribute. It is the function of the local extension officer to bring to bear on rural problems the best information and judgement available. This will include factual information on local conditions, technical information from research agencies, recommendations of agricultural scientists relative to specific problems, the guidance of extension supervisors who can bring the experience of other areas, and finally, but most important, the judgment of local people who have knowledge of local customs and needs. It is often said that local people

do not recognize many of their basic needs. This may be true but it is then the responsibility of extension workers to carry on an informational program that will acquaint them with the facts of the situation and bring about a realization of the need. Until this is done little can be accomplished toward improvement of the situation.

7. Orient programs to the existing technical, economic and social level of the people of the area. Too often an attempt is made to bring people in a single step from primitive to modern techniques in agriculture, when their education, experience and economic resources will not permit such a rapid change. People are largely a product of their experience and cannot make such abrupt changes. It is therefore important to understand their level of education, their customs, skill and their existing beliefs, as a basis for an extension program. The situation is similar to that in more formal education, where elementary and secondary education are the necessary prerequisites to university training. Even where people are literate and capable of understanding improved agricultural techniques, they may not have the physical or financial resources necessary for modern agricultural practice. Programs should be planned to utilize only those resources available to the people of the area.

8. Clearly defined objectives at all levels in terms that people will understand. According to Paul Leagans [1], if there is to be progress and not mere evolution in the development of people, the objectives of extension services must be clearly determined and periodically reviewed in the light of progress and changed conditions. A good objective in extension is one that will provide possible direction for large numbers of people to move some distance. Extension must help people define the directions in which they want and need to go, then provide assistance to them in traveling in those directions.

9. Extension programs should be carried on by well trained personnel, effectly supervised. There is no substitute for technical training of extension workers. The level of such training should be such that the worker will command the respect of the most advanced farmers, and enable him to deal intelligently with all ordinary problems which he encounters in the area. However, no one person can be an expert in all technical, economic and social fields. He should therefore have the support and assistance of extension workers with specialized training in various fields. Such specialists can assist in the diagnosis of problems, interpretation and adaptation of research information, development of programs in their specific fields, and in the in-service training of local extension workers.

In order to acquire and maintain the confidence of rural people, the extension worker must also have wide practical skill. As one extension worker in an underdeveloped country has said, he must be able to do the tasks of an ordinary cultivator and to do them well.

A third type of training which is essential, is training in extension methods. How to organize and conduct meetings and demonstrations effectively; how to prepare educational exhibits; how to speak effectively and gain the interest and cooperation of rural people; efficient management of an extension office, and many other techniques are required.

10. Use organization as a tool to accomplish objective. There are many formal and informal groups in every community. It is the job of the extension worker to find and utilize these groups whose objectives are in line with those of the extension service. Working alone, an extension worker can influence a relatively small number of people to adopt improved practices but by enlisting the cooperation of existing groups the results

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[1] J. Paul Leagans - Extension Objectives - USDA Extension Service

of his effort can be multiplied. It is often necessary to organize new groups to carry out certain phases of the extension program such as youth work; dairy herd improvement, etc. In planning new organizations, care must be taken to avoid conflict or duplication with groups already active or interested in this activity.

11. Good program building provides for evaluation of results. Any attempt at evaluation is dependent upon careful definition of objectives. It is therefore important when planning a program, to state objectives clearly and in terms that can be measured or evaluated. Records should be provided which will show achievement in terms of these objectives. Many social objectives of extension work are somewhat intangible but if clearly stated in terms of desired action of people, results can be appraised periodically.

12. Make maximum use of voluntary leadership in the planning as well as in the execution of extension programs. Aside from the great contribution they can make to program planning through their knowledge of local problems and conditions, local people need to take major responsibility for the program's operation if it is to be most effective. It is understandable that people in general have greatest interest in those programs which they themselves have had a part in planning. It is important that rural leaders shall not only be consulted regarding extension plans, but shall help decide what projects will be undertaken and how they will be operated.

13. Make sure that the program is achievable considering such factors as personnel, finances, time and facilities. A common weakness of extension programs is that they include attempts to solve too many problems at once without making a significant contribution to any of them. Exercise care to select a few important problems for attention in any one year, including some which give promise of immediate satisfaction to the people involved. At the same time make a beginning on more basic problems requiring a longer period for completion, but which are also recognized as being important. Such problems must be carefully selected, and those phases attacked in the beginning which will clear the way for greater effort in the future. Goals set for accomplishment in a given period of time should be practical and achievable to avoid discouragement of those who participate in the program.

Approaches in Extension Program Planning

Group planning of extension programs assumes that the people involved have common problems, interests and aspirations. Planning is broken down from national to state, to county and to local units to provide consideration of the specific interests of groups with related values, needs and interests. Within the county, or other unit of local extension service administration, the extension worker must decide upon the most effective groupings of people for program development and execution and the corresponding form the program shall take.

Three general categories of approach may be used: (1) development of the program by communities or neighborhoods; (2) program development by commodities or projects; and (3) a combination of the two.

Community development of programs involves consideration of all elements of the situation, establishment of priorities and adoption of goals satisfactory to all elements of the population. It will normally involve the agricultural enterprises deemed most important, improvement of homes, youth training and community development. This approach works well in general farming areas with some uniformity of needs and interests. In such situations it provides an excellent method of developing community cooperation not only in the planning but the execution of programs.

The commodity or project approach brings together for planning all those in the county or area who are interested in a specific crop, livestock enterprise, weed control, educational activity (such as youth work, nutrition, or health education) in planning and executing a program in that field. They may live in different areas, belong to different social classes and not be well acquainted but have a common interest in this specific commodity or project. This type of organization for planning appeals to specialized farmers such as coffee growers, dairymen and specialized fruit and vegetable producers. They may have little interest in all of the other crops grown in the area.

In most counties, both situations exist in varying degree. Hence the extension worker needs to use both approaches in planning his program. He will work with community groups in planning those parts of the program dealing with problems of general interest, and to learn of the groups with more specialized needs. He will then arrange for representatives of these special interests to meet, possibly on a county-wide basis, to plan specific activities. This can often be accomplished by establishing a set of committees on specific problems or activities such as coffee production, weed control, dairying, irrigation, gardening, rural youth work, home improvement, nutrition etc. These committees may then report to a county program committee which is responsible for coordinating and approving committee proposals and combining them into a county program.

At this point a word of caution is in order. The extension worker who is inexperienced in program development should keep his procedures simple in the beginning to avoid confusion and frustration. With experience he can elaborate his procedures to make them more effective in accomplishing programing objectives.

Program Planning and Execution [1]

Principles of program planning and execution are of no value unless they are adopted and applied. The extension worker must, therefore, develop a practical procedure assuring adherence to accepted principles.

Such a procedure may be very simple in the beginning and elaborated as more people become involved in an expanding program. In any case, since program development is a continuing and repetitive process, the procedure may best be considered as a cycle involving seven essential steps. These steps are repeated in each cycle, taking into consideration changes that have resulted from action in the intervening period.

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[1] Extension Development Around the World - Guideline for Building Extension Organization and Programs. Federal Extension Service, U.S. Department of Agriculture in cooperation with Agency for International Development, U.S. Department of State.

The following is an idealized chart of steps in program planning arranged chronologically. Some of the procedures or steps may appear more idealistic than practicable. However, the whole process involves a logical sequence of operations.

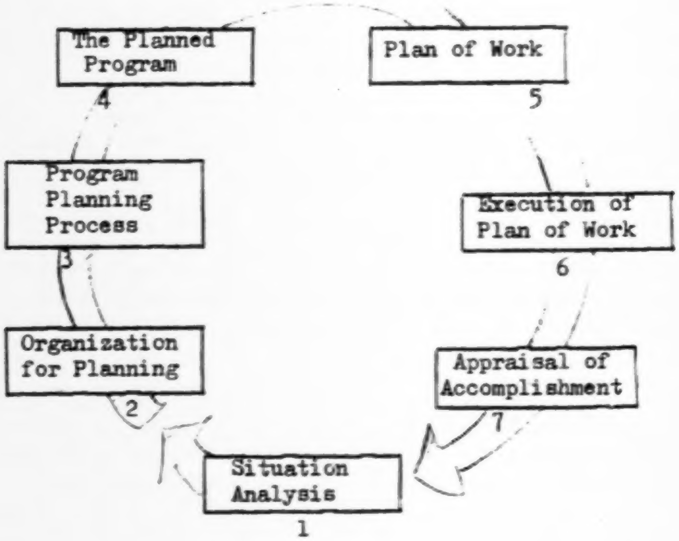
The Planned Program
4
Plan of Work
5
Program Planning Process
3
Execution of Plan of Work
6
Organization for Planning
2
Appraisal of Accomplishment
7
Situation Analysis
1

Figure 10-1

In actual practice these steps frequently overlap, that is the knowledge of the situation is further developed in each succeeding step. Also, an extension worker may have to proceed without certain situation information which would be most useful in deciding on a program. Nevertheless, effective extension workers observe these steps.

Situation and Analysis (1)* All subsequent steps are dependent upon the situation. In fact, the whole purpose of extension education is to permanently change selected elements of the situation-farm income, family nutrition, rural leadership, and land use, for example. Those involved in planning the local extension educational program need the best possible understanding of the situation in respect to the following elements:

1. Agricultural resources and current farming patterns and practices.
2. Economic factors-credit, markets, price structure.
3. Local culture-family system, needs, values and desires.
4. Socio-political system—formal and informal systems of government.
5. Peoples' abilities and individual resources—their skills, understanding, and intellectual development.
6. National development programs and goals.

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* (1) This and succeeding numbers (2) through (7) refer to numbered steps in the program cycle.

7. Channels of communication through which people obtain information, exchange ideas and make group decisions, and

8. Other governmental and non-governmental development programs which are active in the community, and the role of extension education in relation thereto.

Professional extension leaders at state and/or national levels require a broad understanding of all the above elements in national perspective. More detailed knowledge is required of such elements as:

1. National development programs and goals,

2. Facilities for training extension workers,

3. Present and potential resources available for use in extension education,

4. Potential needs for extension education in relation to economic and social development programs and goals, and

5. Sources of technical information and advice within and outside the country.

Organization for planning (2) Effective organization provides a means of involving people in the program planning process. Involvement of people is a basic element of extension education. Participation helps to arouse interest, and those helping to determine a program will usually do all they can to make it succeed. Involvement of people also results in better programs. Successful programs take into account local knowledge, habits, materials, and experience, in addition to the technical subject matter.

Extension education may have an influence on many other institutions and organizations such as religious groups, schools, research agencies, and social organizations and services. Close liaison with these groups at all stages of extension program development and implementation encourages cooperation and reduces friction.

Extension education in a community, province, or country will eventually affect very large numbers of organizations, groups, and individuals. Not all of them can be involved from the beginning. A problem, therefore, is to determine whom to involve in the program planning process, and by what means. The following steps are suggested as a general guide:

1. Identify and counsel with:
    a. Existing leaders—both formal and informal,
    b. Cooperators in previous extension or related rural programs if any, and
    c. Individual citizens having useful knowledge, understanding, or interest.
2. Consult with other professional workers in agriculture and home economics such as:
    a. Formal or informal planning committees,
    b. Tribal councils and other official bodies,
    c. Commercial and cooperative organizations, and
    d. Administrators of programs in related fields.

Program planning process (3) The ideal program planning process includes a sequence of steps carried out in consultation with the groups and individuals mentioned in the preceding section. It is necessary to:

1. Identify wants and needs. Rural people are ready to undertake programs which they believe will satisfy their wants, although they may not be aware of all their basic needs. For example, they may want a higher price for the rice they produce, not knowing that it is possible through use of better varieties and cultural practices to obtain much greater yields and a fair profit at existing prices.

   Consultation with specialists and other technically trained people will point up the more basic needs and ways of satisfying these needs. It is the job of the extension worker to bring this technical information to the attention of rural people to change their minds as to what they want, and provide a basis for a sounder program more acceptable to the people.

2. Determine relative importance of various recognized needs, and decide on priorities. This must be done in consultation with the people whose co-operation is required in conducting the program.

3. Identify the problems involved in satisfying the needs given high priority.

4. Determine possible solutions of problems or alternative courses of action. Solutions may come out of the experience of the people themselves or they may be suggested by the extension agent or specialist.

5. Agree upon objectives. This is a joint function of extension workers and the rural people involved. In order to be of value, objectives must:

   a. Identify needs and wants,

   b. Specify the specific behavior changes to be sought,

   c. Identify the people involved, indicate the changes to be made and the subject matter to be used,

   d. Select those objectives that are practical in terms of staff, materials, and other available resources, and

   e. Meet the test of most of the following criteria:

      - Is the proposed change at the top or near the top in the recognized desires or needs of the people?
      - Is it a change that is important to many?
      - Will local leadership give full support?
      - If carried out as recommended, is it certain to work?
      - Have "off-the-farm" hurdles to success been cared for?
      - Is it practical and simple enough for people to adopt and carry out?
      - Is it practical and possible for professional staff to give adequate guidance?

- Can it be used as a teaching medium for others?
- Can the program, where carried out, be used as an example of what extension can do?
- Are the results readily observable and able to be accomplished within a relatively short time?

f. Prepare statements of the objectives:

- For the persons or groups that were involved in determining the program,
- To incorporate into the written program, and
- For use in informing interested and concerned persons and groups.

The planned program (4) A planned program should be recorded in written form and copies made available to all cooperating groups. This is necessary to avoid later misunderstanding as to what was agreed and to serve as a criterion for measurement of achievement. A good written program will normally contain:

1. The names of persons who planned the program and the procedure followed,
2. A situation statement of needs, interests, and identified problems,
3. Statement of agreed objectives, and
4. Provision for coordination with other groups, agencies, and organizations.

Plan of work (5) The plan of work is a primary tool of the extension worker which he prepares for his own use as an aid in attaining the objectives of the program. A plan indicates specific action to be taken, by whom, when, and where, and what accomplishments are expected. It includes a list of the required resources and how they are to be procured. The following are some guiding principles which may prove helpful in preparing and using a plan of work:

1. It is based on the planned program and includes the extension methods and other means to achieve the stated objectives.
2. The plan of work should be revised as needed to reflect progress and changes in goals and objectives.
3. It should include necessary procedures to accomplish program objectives, establish calendars of activity, and designate responsibilities.
4. The total extension job specified in the plan must be practical in terms of staff, time, and other available resources.
5. The annual plan of work should be realistic in terms of possible accomplishments—these to be limited to a few improved practices which can be observed readily by the people and the extension workers.
6. It should incorporate appropriate evaluation procedures to appraise changes in the people reached.

Execution of the plan of work (6) Program action is the "heart" of the extension education process. It is here that people learn improved skills, gain knowledge, and are led to change their attitudes.

The first requirement for successful program action is sound technical knowledge on the part of the extension worker. For example, he should know the kind and amount of fertilizer most effective in rice production. The second is the use of extension teaching methods suited to the subject matter and to the people involved. For example, the result demonstration is effective in showing illiterate farmers how they may use fertilizer to increase rice yields.

The value of advance planning of each program activity cannot be over estimated. This includes making sure that all people involved know their responsibilities and how to carry them out, advance preparation of teaching aids, checking on supplies and equipment to assure their availability well in advance of the time they are needed, and special efforts to make each activity a useful learning experience for all participants.

It is usually easy to find a few individuals in a community who will change their practice under close supervision and guidance of the extension worker. The real test of an extension program is the extent to which improved practices, skills, and attitudes are adopted by the masses of rural people.

The great challenge to extension educators under these circumstances is to find and develop channels of communications to reach the masses of rural people with a practical educational program, and to do it within the resources available for this purpose.

Reports from a cross-section of countries provide examples of widespread adoption of certain improved practices in limited areas. Carefully prepared case studies should show the factors responsible for success under existing conditions. Such studies should provide useful information in planning and applying these practices on a nationwide basis and in other countries with similar situations. Much more study is needed to determine the processes through which people of varying cultures receive new knowledge and are influenced to change practices and attitudes.

Appraisal of accomplishment (7) Periodic evaluation in terms of objectives of the program provides a basis for continuous improvement. Plans for evaluation need to be included in the plan of work. This may involve an accurate description of the situation existing at a given time, a record of changes proposed and accomplished, and the periodic description of the situation as it changes with time. Educational methods may also be evaluated to determine their individual and collective influence in inducing change. The results of such evaluations are useful only as they are used in planning future programs.

Use of Objectives in Extension Program Planning 1/

An analysis of the situation in the process of extension programing will bring out the facts and problems which need to be looked into by the extension worker engaged in improving the standard of living of rural people. Objectives help him to do this more efficiently.

Kelsey and Hearne 2/ define objectives as "expressions of the ends toward which our efforts are directed" in other words, an objective in extension is a direction of movement or a statement of some predetermined action or product to be reached through educational processes.

1/ Extension Program Planning as Developed in Nigeria M.A.N.R. Extension Training Bulletin No. 2, Ministry of Agriculture and National Resources, Government c Western Nigeria.

2/ Lincoln D. Kelsey and Cannon C. Hearne - Cooperative Extension Work - Ithaca, New York, Comstock Publishing Associates 1955.

Raudabaugh [1] clarifies this further by saying "objectives are the criteria by which content is outlined, materials selected, teaching procedures and learning experience developed, and progress toward accomplishment, and accomplishment are evaluated." An analysis of the situation in the extension program process will bring out certain facts and problems which need to be looked into by the extension worker engaged in an action program for improving the standard of living of rural people.

Let us now assume that the extension worker is concerned with the improvement of the standard of cocoa beans produced by cocoa farmers in X Division, with a view to getting a better income from their plantings. This might be known as the clean cocoa bean campaign which MANR has been staging during the last two or three years. Objectives may be considered at three levels:

Fundamental objectives

- To develop Nigeria
- To develop Western Nigeria
- To develop agriculture
- To help farmers lead a more satisfying rural life.

These are the all inclusive objectives of society, that is, the development of the individual, of communities, of society itself, and of the country. The fundamental (teaching) objective is to teach people how to determine their own problems, help them acquire knowledge about the problems, and motivate them to the extent that they will want to do something about the problems.

General objectives

These objectives are the bases of our long term program aims, to bring new ideas, new techniques, new knowledge; all leading to better crops, better homes, better health, and better citizenship. We try to make people more efficient, improve income, and better the standards of living.

Specific objectives

This is where people's needs are brought into focus one at a time, where teaching situations are set up, and where extension teaching takes place.

Each specific objective should have three aspects:

1. A particular group of people
2. A particular subject matter area
3. A definite change in behaviour

Let us continue our example of clean cocoa beans and see what changes in the cocoa farmers must come about, if the objective is to be achieved. These educational objectives must be considered:

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[1] J. Neil Raudabaugh - Goals and Objectives pp. 18-21 of Evaluation in Extension. Washington D.C. Federal Extension Service, U.S. Department of Agriculture, Darcie Byrn, Editor. 1959.

Changes in attitudes and ideals or points of view such as

- To appreciate the need for clean cocoa beans
- That efforts must be made to produce them
- That health of trees, ways of gathering pods, and of drying the beans are all to be considered
- That capsids and blackpod disease must be controlled
- That beans can only be kept clean by proper handling, and keeping out goats and poultry

Changes in knowledge or things known, or amount of useful information

- That capsids and blackpod can be controlled
- Knowledge of spray materials and application

Changes in skills or ability to perform specific acts or practices

- Spraying techniques - How to remove pods from trees, how to open them, how to ferment and dry beans and how to lay cement or other hard floor for drying

Well defined objectives help us to know what we are aiming at, and to let others know; to select the proper extension method or combination of methods for our teaching situations and to see what progress we are making.

Good objectives are clearly worded, attainable, bring satisfaction to those doing them,are justifiable, socially desirable, and developmental — develop people as well as programs.

In setting up priorities one needs to consider:

- How many people are involved?
- How widespread is the need?
- Why does the need exist?
- Relative importance compared to other needs
- What would happen if extension were to do nothing about the need? (economically, socially, politically?)
- Seasonal priorities
- Long term vs. short term needs
- Relative costs of projects
- Which will bring the best returns to the farmer, the extension service, the region and to the country?

Example of a Complete Set of Extension Objectives 1/

Fundamental objective

- To improve agriculture and raise the level of living of farmers in Western Nigeria

General objective

- To improve the yield and quality of cocoa beans produced in X Division, as one means of bettering the livelihood of cocoa farmers in Western Nigeria.

Specific or working objectives

- To introduce to the cocoa farmers in X Division the best variety of cocoa seedlings
- To encourage them (the cocoa farmers of X Division) to adopt the best planting system and to plant on the soils most suitable for cocoa
- To encourage them to adopt the proper after care of seedlings and proper maintenance of the plantings
- To encourage them to adopt and use proper chemical spraying techniques to control blackpod disease and capsid insects
- To encourage them to adopt better techniques of harvesting cocoa pods
- To encourage them to adopt proper techniques of fermenting and drying cocoa beans
- To encourage them to adopt use of fences made of local materials to keep out goats and poultry to maintain beans in clean condition
- To encourage them to lay cement or other hard areas to keep beans clean during drying
- To encourage them to adopt proper sorting and bagging procedures for the processed beans
- To encourage them to adopt proper techniques of storing their processed beans

Use of a Specific Objective in Extension Program Planning 2/

The following specific program objective is repeated here. It will then be fully described as to what it means for the extension worker both to know and to do, and to base his actions on.

"To encourage them (the cocoa farmers of X Division) to adopt and use proper chemical spraying techniques to control blackpod disease and capsid insects."

1/ Extension Program Planning as Developed in Nigeria M.A.N.R. Extension Training
2/ Bulletin No. 2 Ministry of Agriculture and Natural Resources, Government of Western Nigeria.

Based on this specific working objective, certain behavioural changes in the cocoa farmers of X Division must result, if the objective is to be achieved. These educational objectives can be classified into the following:

Changes in attitudes and ideals or points of view

- To appreciate the need for clean cocoa beans
- To be convinced that proper use of chemical sprays will control capsid and blackpod without injury to the trees or the beans
- The desire or attitude of wanting to know how to use and how to apply the chemicals

Changes in knowledge or things known, or amount of useful information

- That capsids and blackpod can be controlled through use of chemicals
- General knowledge of chemical sprays and how they work
- Specific sprays for capsids and blackpod
- Costs, benefits, increase per acre or per tree resulting from use of chemical sprays
- When to apply the dosage
- How to use spray materials with safety

Changes in skills or ability to perform specific acts or extension practices

- How to use spray equipment
- How to mix spray material and water
- How to spray trees to be sure all necessary parts are covered with spray solution
- How to handle spray equipment after use to prevent rusting or clogging of nozzles
- How to use care in chemical sprays to prevent injury to children, other persons, animals, and other crops
- How to recognize the results of spraying to see that it is doing what it is supposed to do.

EXTENSION ACTIVITIES BASED ON A SPECIFIC PROGRAM OBJECTIVE

Specific Program Objective	Changes to be brought about through Educational Media	Extension action required	Teaching situation to bring about change	Extension methods to be used in teaching situation
To teach cocoa farmers in X Division how to increase yield and quality of cocoa beans through the use of chemical spray materials to control blackpod disease and capsid insects.	1. Changes in attitudes, ideals and points of view a. To appreciate the need for clean cocoa beans. b. To be convinced that proper use of chemical sprays will control capsids and blackpod without injury to the trees. c. The desire or attitude of wanting to know how to use and how to apply the chemicals	Extension workers to describe overall need for clean cocoa beans, that acceptance on world market depends on quality, that quality and income can be reduced by disease and slatey beans from diseased trees or trees attacked by capsids, etc.	Posters in prominent places in village, at village meetings, news-stories (if they are appropriate), by word of mouth from extension workers to village leaders.	Mass media means (posters, news stories), use local leaders as much as possible, have visual aids at meetings, such as charts, slides, photographs, samples of clean and contaminated beans, have models or photos of capsids and specimens of cocoa pods affected by blackpod.
	2. Changes in knowledge or things known or amount of useful information a. That capsids and blackpod can be controlled through use of chemicals. b. General knowledge of chemical sprays and how they work. c. Specific sprays for capsid and blackpod	Present facts and figures based on local sources to show increase in bean production per tree or per acre; have farmers who have sprayed tell of their results; have interested farmers see trees that were sprayed and be able to see for themselves.	Village meeting, have discussion by leaders and extension workers, use farmers who have sprayed tell of their experience in own words; (meeting can be the same as that for change of attitude above).	Exhibits, posters, visual aids at all meetings; invite discussion with questions and answers (try to encourage questions on practices being described to improve quality of beans rather than allow meeting to degenerate into a lot of discussion on world prices of cocoa); have farm walks led by extension worker and lay leaders to nearby plantings that have been sprayed to see for themselves.

EXTENSION ACTIVITIES BASED ON A SPECIFIC PROGRAM OBJECTIVE (Cont'd.)

Specific Program Objective	Changes to be brought about through Educational Media	Extension action required	Teaching situation to bring about change	Extension methods to be used in teaching situation
To teach cocoa farmers in X division how to increase yield and quality of cocoa beans through the use of chemical spray materials to control black-pod disease and capsid insects	d. Costs, benefits, increase per acre or per tree resulting from use e. When to apply and the dosage f. How to use spray materials with safety			
	3. Changes in skills or ability to perform specific acts or extension practices a. How to use spray equipment b. How to mix spray material and water c. How to spray trees to be sure that all necessary parts are covered with spray solution d. How to handle spray equipment after use to prevent rusting or clogging of nozzles	To arrange for cocoa growers to see, hear and discuss the spraying techniques, with plenty of opportunity for them to try it and to learn to do it; much guidance and patience will be required on the part of the extension worker to see that these skills are properly developed.	An actual spraying situation be performed for benefit of groups of interested farmers on how to mix and apply; select an area near to where most farmers live; use local leaders as much as possible; go through established leadership of village to arrange for demonstrations and for permission to observe sprayed plots of trees.	Method demonstrations will be the best means to show how the spray materials are mixed and applied; result demonstrations to show effects of sprays and increase in number and quality of beans produced; mass media to let interested farmers know about demonstrations (can use posters or other printed or cyclotyped notices), use visual aids at the demonstrations so that entire procedure is clear to all farmers; proper equipment and materials; don't forget follow up to assess value of demonstrations and other extension

EXTENSION ACTIVITIES BASED ON A SPECIFIC PROGRAM OBJECTIVE (Cont'd.)

Specific Program Objective	Changes to be brought about through Educational Media	Extension action required	Teaching situation to bring about change	Extension methods to be used in teaching situation
To teach cocoa farmers in X division how to increase yield and quality of cocoa beans through the use of chemical spray materials to control black-pod disease and capsid insects	e. How to use care in chemical sprays to prevent injury to children, other persons, animals and adjacent crops. f. How to recognize the results of spraying; is it doing what it is supposed to do?			methods used and to determine the next step to lead farmers to acceptance of the practice; may be necessary to repeat demonstrations; constant alertness required on part of extension worker to be sure he is most effective.

Calendar of Work

We have, up to this point, described the steps involved in preparing an extension program and how to write and word our objectives at the fundamental, general and specific levels. We selected one specific objective and followed it through the process of setting up teaching situations and choosing extension methods to put our messages across to the farmers.

We now come to the preparation of our calendar of work. This is the calendar for only one specific objective; our extension program is made up of the total number of specific objectives for all appropriate activities including selection of varieties, planting, fertilizing, cultivation, harvesting and marketing, for all major crops and farming pursuits (oil palm, cocoa, rubber, citrus, cotton, rice, food crops, poultry, etc.).

Following the previous example given in respect of extension activities based on a specific program objective, we shall now present an example for an extension calendar based on specific objectives in respect of cocoa.

Specific objective: "To teach cocoa farmers in X Division how to increase the yield and quality of cocoa beans through the use of chemicals and spraying materials to control capsid and blackpod".

Calendar of Operations

Month	Operations
January	(i) Extension campaign with farmers to train in the control of capsid and blackpod. (ii) Farmers should be advised to purchase chemicals, now that they are receiving money from their cocoa, for blackpod spraying, commencing in May and capsid in August. (iii) Cocoa nurseries maintenance to continue.
February	(i) Campaign with farmers on training for control of capsid and blackpod. (ii) To advise farmers to end "spot" spraying of their cocoa farms against capsid. (iii) To check up on farmers intending to plant improved seedlings; examine soils, shade, and recommend otherwise, if necessary.
March	(i) Time to train farmers in the control of blackpod and capsid by spraying. (ii) Cocoa nurseries maintenance continues. (iii) Campaign to be intensified for more farmers to come forward for training. Use loudspeaker van, if possible. (iv) To assist farmers in lining out,and give instruction on planting methods, etc.
April	(i) Teach farmers to prepare their farm for cocoa planting, holding, lining out, etc., use demonstration method techniques. (ii) Start selection of seedlings in the nurseries; destroy seedlings that are not good. (iii) Warn farmers to start collection of seedlings as from May 1st. (iv) Campaign for blackpod spraying.

Month	Operations
May	(i) Transplanting of seedlings to begin. (ii) Supplying of vacant stands to begin. (iii) Spraying against blackpod to commence. (iv) Harvesting of light crop continues.
June	(i) Spraying against blackpod continues; campaign to be intensified. (ii) Planting of seedlings to continue and pushed with greater vigour. (iii) Supplying of shade for new plantings. (iv) Harvesting to continue.
July	(i) Distribution of seedlings to cease as from July 1st, except as supplies to vacant stands. (ii) Thinning out of shade. (iii) Weeding and removal of mistletoe.
August	(i) Campaign for capsid spraying; spraying against capsid to begin. (ii) Spraying against blackpod continues. (iii) Preparation of nurseries to commence. (iv) Time to repair taraga. Continue weeding of cocoa farms.
September	(i) Spraying against capsid to continue and be intensified. (ii) Planting of nurseries to commence. (iii) Continue to weed and remove mistletoe. (iv) Harvesting of main crop begins.
October	(i) Continue to plant in the nurseries; preparation of shade for nurseries (ii) Continue weeding and remove mistletoe; harvest regularly.
November	(i) Start "spot" spraying against capsid, spray trees infested with capsid. (ii) Harvesting continues. (iii) Planting in nurseries continues (iv) Start campaign for training in capsid and blackpod control.
December	(i) Spot spraying against capsid continues. (ii) Compaign for training in capsid and blackpod control continues. (iii) Nursery maintanance to continue.

Section IV EXTENSION ADMINISTRATION AND OPERATION

Chapter 11

EXTENSION ADMINISTRATION [1]

The administration and operation of every extension service and program to be effective has to be in keeping with the accepted principles and practices of public administration and the policies and procedures established in each country for operating public services. On the other hand general administrative structures and procedures must be adjusted to the country's needs and resources and the social and economic conditions under which the extension service is to be operated. These special conditions set the pattern over and above standard administrative procedures in operating the extension program.

The administration of the extension service calls for certain specific considerations and adjustments because the nature of extension differs quite distinctly from that of any other public service. Extension programs reach rural people through educational processes, a unique framework within which the extension service is to operate.

It is important that all officials concerned with programs of rural development have a clear understanding of the nature, scope and methods of operation of extension services. These include not only those directly responsible for extension administration but policy officials in the ministry of agriculture, directors of technical services and leaders of other organizations and services concerned with rural progress. Administrators of national development programs are usually weak in drawing a distinction between extension work, the enforcement of regulatory measures and the provision of direct services to the people. It is difficult for these officials, in planning for agricultural development,to integrate education with other parts of the program. The period required by officials and leaders of developing countries to understand the importance of extension and of the integrated approach can be sustantially reduced if it can be started, as recommended by the Food and Agricultural Organization in pilot zones.

An additional problem in extension administration arises from the fact that in several countries extension operates at present as a part of previously existing agricultural services, and legislation setting up extension services fails to define its essential feature. There are very few countries in which legislation spells out such vital matters as the scope and objectives of the extension organization, its structure and relationship with research and other ministry services, the post of extension director, and provision for financing extension activities. As a result of this institutionally vague situation it is difficult for the administrator to operate a unified extension program and to prevent extension personnel from being assigned regulatory and service type work or from actually being transferred to other services.

When the extension service is newly established and many essential elements are still undeveloped, the administration is confronted with many problems arising in the day-to-day operation of the program. Some of these problems are extremely difficult to settle and often may threaten the very existence of the service. Many of these situations and problems cannot be anticipated in advance and dealt with by established rules and procedures but call for new non-programmed decisions - problems, for instance, which may arise from the assignment of the functions of an extension subject matter specialist to a technician serving in a technical division of the ministry or in a research institution, or the overlapping of functions of field workers responsible to separate services. If the particular problem is of such a nature that the decision reached establishes a desirable precedent then it may become a standard procedure in handling similar situations. That is it becomes for the extension administration a programed decision. It is through such a process that the administration of a newly established service develops its particular policies and procedures. When the extension service has been well established within the framework of the ministry of agriculture, the program is operated mostly through standard procedures and very few non-programed decisions have to be made, even though the service continues to broaden its scope, restate its objectives from time to time, and adjust its organization in order to meet the evolving needs of the farming population.

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[1] Basil C. Moussoures former Director of the Extension Service, Ministry of Agriculture, Greece

In the administration process we can also distinguish two other types of decisions: organization decisions, which can always be delegated and the personal ones which ordinarily cannot be delegated to others. The extent to which organization decisions, as made in the central administration, are delegated to regional and field services determine the degree the extension program is decentralized. In the decision making process, the extension administration needs to have a set of guiding principles with which its decisions should be in keeping. Violation of such guiding principles will result frequently in perplexing situations. At the same time it is important to have a degree of flexibility in implementing the extension program. Thus programmed decisions should allow ample room for judgement and evaluation of factors involved in particular situations.

In formulating policies and procedures and in making major decisions, extension administrators should evaluate fact and alternative in the light of long-term objectives of the program and the interests and needs of the people. Extension administrators should therefore keep asking themselves every time they are to make a major decision such questions as the following:

- Does the envisaged policy safeguard the educational character of the program?
- Does it promote better liaison and coordination with research and other ministry services, institutions and agencies serving agriculture?
- Does it foster understanding, cooperation, initiative and leadership along the line among extension personnel?
- Will the policy or procedure to be adopted help to decentralize and meet more effectively the particular needs of farm people?

Qualifications and Functions of Extension Personnel

The qualafications and functions of personnel serving in the various posts of the ministry of agriculture and assigned extension responsibilities, depend to a great extent on the organizational structure of extension in each country.

Where extension as a public service is in its first stage of development, and the educational functions are not clearly distinguished from those of enforcing regulations and providing services to the people, extension activities are sometimes carried on by field personnel together with other duties. In some cases ministries have gone to the extreme of assigning to the same field worker all responsibilities for research, extension, regulatory and service-type work in each major agriculture field. In still others, a bureau of extension is set up in the ministry while technical divisions continue to be responsible for extension work in their respective fields. Under such organizational patterns the extension program is fragmented, functions may overlap and often contradictory advise is given to the farmer while the extension bureau is restricted to the dissemination of information through publications, radio broadcasts, agricultural exhibits and other mass media.

Irrespective of the stage of development of the extension organization and the extent to which functions have been defined at all levels, extension workers can be classified in three broad categories: (1) local extension workers in direct contact with farm people: (2) those who backstop local workers, supervise the program, provide technical help and advise in subject matter fields as well as on extension methodology: and (3) those whose main functions are administrative.

A more detailed functional classification of extension personnel as today understood, would require tracing vertical lines of executive authority between those having administrative responsibilities from the top to the lowest echelons in the field. Horizontal lines of liaison and cooperation would also exist on each level. These would connect non-executive interrelated and specialized functions like those of supervisors, subject matter specialists and information officers.

When the extension organization has evolved from sections in technical services to an independent extension service with a unified program, it will have bureaux with specialized responsibilities, such as agriculture, youth training, home economics, agricultural information and extension personnel training. Then the lines of executive authority run from the director to the heads of bureaux, to the directors of regional agricultural services and from them to chiefs of extension sections and/or to regional extension supervisors in case regulatory and service-type functions have been clearly distinguished from extension. Under these assumptions the attached chart was drawn to illustrate the lines of administrative and non-executive authority. This organizational pattern, found in many developing countries, is well adapted to existing conditions. It provides for a reasonable division of labor and the grouping of functions in keeping with the needs of the program. It establishes direct lines of authority between the extension administrator and the field personnel.

In case the extension organization is incorporated in a general administrative pattern of regional services breaking into smaller units - usually counties - the extension program on the country level may be assigned to one agricultural officer and village level workers under his supervision. It may be better under most circumstance to let the county agricultural office deal with regulatory and service-type work while the extension program is the responsibility of local extension agents under the supervision of the chief of extension in the regional service. In this case extension workers maintain liaison and cooperation with country agricultural offices. This type of organization is preferable since lines of administrative authority and supervision are kept short and direct.

After this brief discussion on how lines of authority may run within an extension service we will describe the functions and qualifications of various categories of extension personnel.*

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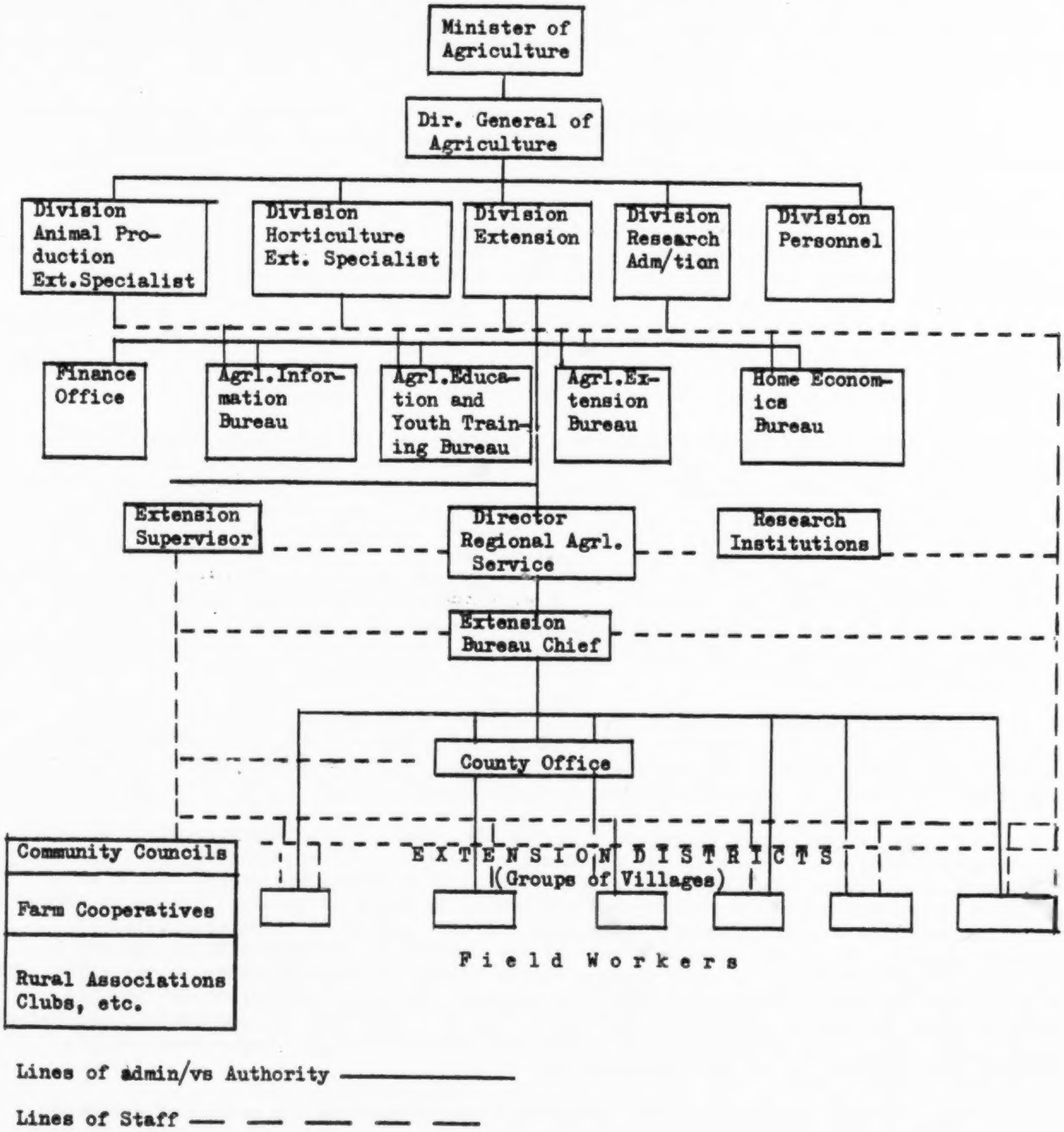
*Editors note: In adapting the above described organization pattern and accompaning organization chart to a specific country one should keep in mind the need for the extension administrator to maintain control of his staff. For example, the extension subject matter specialist may be located in a technical department but should be administratively responsible to the director of extension. At the same time the specialist may look to his technical department for guidance on technical matters. A district or county agricultural officer has coordinating responsibility for agricultural programs in his district but should not have authority to assign non-educational activities to extension personnel.

ORGANIZATION CHART

Extension Service

Ministry of Agriculture


Minister of Agriculture
Dir. General of Agriculture
Division Animal Production Ext.Specialist
Division Horticulture Ext. Specialist
Division Extension
Division Research Adm/tion
Division Personnel
Finance Office
Agrl.Information Bureau
Agrl.Education and Youth Training Bureau
Agrl.Extension Bureau
Home Economics Bureau
Extension Supervisor
Director Regional Agrl. Service
Research Institutions
Extension Bureau Chief
County Office
Community Councils
Farm Cooperatives
Rural Associations Clubs, etc.
EXTENSION DISTRICTS
(Groups of Villages)
Field Workers
Lines of admin/vs Authority
Lines of Staff

Qualifications and Functions of the Extension Director

The extension director is responsible to the director general and the secretary or minister of agriculture for administration of the extension service and the operation of its program. In those countries which have adopted the merit system as part of a system of public administration, ministry of agriculture positions, including extension, are classified. Civil Service regulations contain a description of each position and spell out standard procedures to be followed in recruiting, appointing and promoting personnel. In such situations, the appointment of the extension director is done through standard procedures and is a matter of making the proper selection from among those having the required qualifications.

Extension Director's Qualification - An agricultural officer with rural background, a university degree and several years of experience in agricultural fields should be appointed to the post of director of extension. Furthermore, the position should have proper rank and prestige in the hierarchy of the civil service. This qualification is especially important when the extension service is newly established and needs to obtain the recognition of other divisions and services in the ministry. It is highly desirable that the agricultural officer appointed to the post of director should have training in extension principles and methodology and that at least part of his experience comes from actual extension work. With the scarcity of university trained men in developing countries, extension often starts with field workers with secondary or elementary agricultural training. In such cases it is highly desirable to appoint to the post of extension director a senior agricultural officer who has led in the development of extension, has faith in the cause and has the best possible training, field experience and personal qualifications.

Apart from training and experience in agriculture, the extension director must have executive abilities. He must make decisions, manage the service and personnel, and see to it that his staff is trained to make the right decisions. The extension director is constantly in contact with people in the organization he leads, in the ministry and in rural areas. He, therefore, must be able to understand human nature and be respected by people. The director must always have a positive attitude in discussing problems with his superiors and his sub-ordinates, as well as with the public. He must have a highly developed spirit of cooperation and understanding, a basic principle of extension which he himself must practice. Last but not least the extension director must be able to inspire his co-workers and farm leaders and constantly instill in them a sense of duty and responsibility to rural people.

Favorable personal characteristics of extension workers at all levels include vision, ability to plan, initiative, resourcefulness, integrity, faith, courage, judgement, perseverance, tact and power of expression. The extension director should have them to a high degree if he is to successfully lead the service and accomplish his mission.

The Functions of the Extension Director like those of all administrators are those of planning, control and supervision, personnel management, office management, integration, coordination and human relations. These functions are exercised not only by the director of the organization but through delegated authority, by heads of bureaux, chiefs of regional extension services and all those down the line who have executive responsibilities of whatever degree. This involves the direction and control of all executive action and a unity of command which is the main responsibility of the top administrator of any organization. This in turn involves a continuous effort to maintain effective communication (reports, meetings with the staff, circulars, memoranda etc.) and conscious and purposeful cooperation among staff members all along the line. Effective cooperation is a key element in the survival and development of any organization.

Many of the functions of the extension director involve the making of decisions that relate to maintaining and developing the service and operating the program. He must continually strive to broaden the scope, improve the structure and achieve a unified extension service meeting the needs of farm people; to plan a program well integrated with other rural programs; and to assure the necessary funds, personnel and other resources for the operation of the program. Many of the functions of the extension director deal with the supervision and development of extension personnel and the coordination of functions of staff members. Still others involve in-service training, evaluation studies and maintaining proper relationships with other services and agencies, and keeping political leaders, officials, farmers and the public at large well informed of major objectives, program operations and work accomplished by the extension service. To exercise effectively all his functions as summarized above, particularly control and supervision, the extension director cannot rely only upon reports of staff members, supervisors and regional officers. Nor can he rely upon directives and memoranda setting up policies and procedures for the operation of the program. These are necessary and part of the administrative machinery but the director needs also to be in direct contact in the field with extension workers, farm leaders and field officers of other services. He must have a clear picture of the situation and form his own opinion as regards farmers' problems, progress made and difficulties arising in the operation of the extension program. The study of a problem, on the spot, by the director and his staff and his direct contact with people and officials involved, helps him arrive at the best possible solution and to straighten out misunderstandings and difficulties which otherwise might not only impede the operation of the program but could develop into more serious situations.

Qualifications and Functions of Extension Supervisors

Supervision* is today recognized as a key factor in developing extension workers capable of leading farm people in agricultural and rural improvement programs. This factor is especially important for the continuous professional growth of extension personnel.

Both quantitative and qualitative deficiencies of extension supervision constitute major obstacles to extension development. In the first place it should be stressed that supervisory functions are not clearly distinguished from administrative functions and the functions of the extension subject matter specialists. This is understandable in that the concepts of supervision and on-the-job training are new as is the extension approach itself. Traditionally, agricultural services have, like other public services, used inspectors to check on the personnel, work accomplished, and whether public funds are spent in conformity with government regulations. Follow-up of programs, individual guidance, encouragement and on-the-job training of field workers are functions which distinguish todays supervision from formal inspection. In the second place the training of extension workers on the job is extremely important because in most countries extension starts with workers with inadequate training and with no real preparation for this kind of job. An equally important responsibility of supervisors, especially when extension is in an early stage of development, is "to educate" officials and leaders in order that they understand the aims and objectives of the extension program.

Supervision of extension workers, to be effective, must be free from administrative responsibilities which are time consuming and distracting and often make it difficult for supervisors to maintain friendly relations with the workers. Futhermore supervision like the administration of the program, should be decentralized as much as possible. Whatever the structure of the organization, extension supervisors to most effectively carry on their functions, should be placed in the field in contact with the workers they supervise. It is a good practice to place them in strategic centers where they may move freely in the area assigned to them. It is generally best to place supervisors on the regional level together with subject matter specialists where they can most effectively supervise the development of the program in the region and provide on-the-job training of county extension chiefs as well as field workers. This system has given excellent results in certain countries where a few highly qualified supervisors have raised the professional standards of the extension personnel in a short time.

Individual guidance, encouragement and on-the-job advice constitute important aspects of supervision and should be regarded as an essential part of the in-service training program.

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*See page 224 for criteria for Extension Supervision

Qualifications of Extension Supervisors - Extension supervisors should have, apart from an agricultural college degree and a farming background, special training in extension education. Field experience in extension should be regarded as a prerequisite. This means that supervisors must come out of the ranks of the extension service. This requirement is difficult to meet when the extension program is in its initial stages and in developing countries where there is a scarcity of college trained men. In this situation, the extension director may well select a few young college graduates as potential supervisors and future extension leaders. These men can be placed for a two year period in the field to do extension work and then be given the opportunity for post-graduate training with the understanding that after completing their training they will be placed in supervisory posts. Such an arrangement will not only provide the required field experience but equally important it will help prevent men trained in extension from being transferred to other ministry posts.

Qualifications and Functions of Extension Subject Matter specialists

The fundamental role extension subject matter specialists can play in an extension organization emanates from the following considerations. First extension education is not carried on in a vaccum but in actual life situations and to achieve its aims and objectives the extension service has to meet effectively the needs of farm people. Secondly the field extension worker is by necessity a generalist and with the best possible training and experience he cannot long keep abreast of and interpret the findings of agricultural research and technological progress in the present era of specialization. Very often new methods have been tried successfully by farmers in a neighboring region or country under similar agri-economic conditions. To be applied they need to be adjusted to local conditions. Thirdly agricultural research workers need to be in touch with actual farming situations and problems in order to plan and conduct research programs useful in agricultural development.

Therefore, the first function of subject matter specialists is to bridge the gap between science, farm practice and administration and provide two-way flow of information between research and extension. In developing countries, under most organizational patterns, the link of extension with agricultural research is very weak because research is isolated and liaison and cooperation between research and extension field workers are left to their own initiative.

The second equally important function of extension subject matter specialists is to backstop and provide on-the-job training to extension workers. They need to be kept abreast of findings of agricultural research and deal constantly with new situations and problems. This is of major importance to new extension services, which usually have to start with field workers having insufficient technical training and preparation for the job. For these reasons the functions of the extension subject matter specialist should be clearly distinguished from research and regulatory duties and administratively these specialists should be part of the extension organization. This latter requirement is so important that if not properly understood by agricultural administrators, the results achieved by extension specialists may be very disappointing.

In discharging their functions extension subject matter specialists have the following specific duties and responsibilities:

1. Be in contact with research institutions and maintain friendly relations with research workers in their respective fields in order to be well posted on research programs and the findings of these institutions.

2. Be familiar with current bibliography and scientific developments at home and their application in their respective fields abroad.

3. Be in contact with technical divisions in the ministry of agriculture, other specialized agencies and commodity organizations, and be well informed on their policies and programs in order to assure that proper coordination is achieved at all levels.

4. Study present status and trends in the particular production field on the national level and by regions, determine deficiencies, interpret available information and develop concrete recommendations as to: (a) actions that need to be taken by government services and agencies(b) problems that need further investigation by research institutions, (c) new methods and improvements to be introduced and promoted through the extension service, and (d) proposed objectives for the extension program in his particular field of specialization by regions and for the country as a whole.

5. Represent extension in bodies planning for the development of the particular commodity agricultural field and make sure that farmers interests are considered and protected.

6. Participate in the planning of the extension program on the national level and assist regional services to set up priorities and objectives for regional and district programs.

7. Move freely in the field, according to their plans of work and upon request of the extension administration, to study problems brought up by field workers, attend and participate in field activities, and train extension workers in planning and conducting demonstrations, meetings and other extension activites, using information, teaching materials and aids best suited to the particular subject.

8. Prepare bulletins, circulars, instruction sheets and other material to be used by extension workers and farm people.

9. Coooperate and assist visual aids specialists in the preparation of slides, film strips, films, posters, exhibits and other teaching aids.

10. Cooperate with agricultural information officers in preparing press releases, news stories, articles and farm broadcasts.

11. Prepare and keep up to date, reports of work accomplished for use by the extension administration, regional services, research institutions, other agencies, services and farmers organizations directly involved or interested in the development of the particular agricultural field.

12. Participate in evaluation studies and surveys conducted by supervisors, extension specialists in other fields, research workers and others.

Extension subject matter specialists should be agricultural college graduates with specialized training in a recognized agricultural institution. A farm background and experience in their field of specialization obtained prior to their specialized training are very important qualifications.

Very often in developing countries with a scarcity of college trained men, the functions of extension subject matter specialist are assigned to agricultural officers who are gruaduates of middle agricultural schools and have had special training abroad and considerable experience in their particular field. In other instances, college graduates are assigned the duties of extension specialists with little or no formal specialized training in the particular field but on the merits of their experience and service in a research institution or agricultural station or in a ministry service or laboratory. Such appointees with insufficient special training, if experienced and equipped with the proper personal qualifications often develop in a short time into very effective subject matter specialists.

An important qualification for extension subject matter specialists is - as already mentioned for supervisors - to have actual experience in extension work. This condition being difficult to meet in developing countries where the extension services are new, it is often necessary to train prospective extension specialists through an arrangement similar to the one previously described for extension supervisors.

Qualifications, Functions and Terms of Reference of Local Extension Workers

The local extension worker is the most important single element in achieving the aims and objectives of the extension organization. In keeping with extension principles, the functions of the extension worker are those of a teacher, trainer and leader. To fulfill his mission, the extension worker must teach and train farm people to adopt new ideas, better practices, new skills, a progressive frame of mind, and lead them to higher incomes and living standards. In performing this role, the extension worker becomes the "catalyzer" who mobilizes the human resources through self-help and cooperation and draws farm people, services and agencies operating in the rural areas into a "total program" of rural development.

The educational functions, as mentioned previously, are easily confused with other responsibilities, particularly in countries where extension starts with administrative, regulatory and service-type personnel. This constitutes a serious handicap. A second difficulty is that local extension workers must live in the area they are to serve, in order to be in contact with farm people and develop the proper working relations. On account of present differences in living standards between urban centers and villages, agricultural officers, even those with only secondary school training, often are unwilling to live and work in villages. A third difficulty arises from the fact that agricultural officers carrying administrative and regulatory functions sometimes look down on the peasant, develop a bureaucratic frame of mind and do not have the inclination to work with people as required in extension. In view of these difficulties, when the extension program starts and extension functions are separated from administrative and service-type functions, it is not a good practice to select and use former agricultural officers as local extension workers. It is usually better to start with newly recruited field workers who have the desirable qualifications and are capable of meeting the exigencies of the job.

The specific duites and terms of reference of extension workers as conceived today can be summarized as follows:

1. Live in the area assigned to them in order to develop friendly working relations with farm people and be considered by them as "one of their own".

2. Freely move and regularly visit villages, farms and installations in their area according to their schedules, plans of work and the needs of the people.

3. Be in contact and cooperate with farmers, cooperative and community leaders, local dealers in farm products, agents of farm equipment and supply firms, managers of processing plants, leaders of farm organizations and officials of agricultural institutions, services and agencies operating programs in the district.

4. Prepare extension programs and annual plans of work with the help of rural leaders, extension supervisors and subject-matter specialists.

5. Participate in committees, councils and bodies responsible for the planning and implementation of agricultural development programs in their area.

6. Plan and conduct educational activities such as demonstrations, meetings, surveys, field days and study tours, evening classes and workshops for farm youth and adults, and organize agricultural exhibits, campaigns and special projects involving farm people.

7. Impart information to farmers, leaders and others on government policies and programs affecting agriculture and new technologies through circular letters, articles in magazines and the local press, reports, broadcasts and other mass communication media.

8. Bring to the attention of the extension administration problems and situations requiring study and action. Report on extension activities and accomplishments through progress and special reports, personal letters and through contacts with district extension chiefs, supervisors and subject matter specialists.

A farm background combined with desirable personal qualifications and basic training in agriculture are the main qualifications extension field workers should have in order to work effectively with farm people.

The priority of farm background, personal traits and leadership abilities over technical training is based on the idea that the workers approach to the farmer, particularly when extension starts, is more important than technical knowledge. Understanding the peasant and the village society in which he lives is a vital prerequisite for communicating with them. Also, programs for the preservice training of field workers in agricultural schools and colleges can always be adjusted to meet their needs and deficiencies in technical training can be corrected through in-service training.

Additional qualifications for prospective extension field workers which can be acquired as part of their pre-service training include: (1) farm skills and experience in practical agriculture, (2) willingness to work with their hands, and (3) a degree of maturity and desire to help farm people improve their conditions.

To recruit field workers who meet these requirements is not an easy matter in developing countries. Few farm boys and girls attend secondary schools and can continue their training in intermediate agricultural schools and colleges. Then too, training in these institutions may not be properly adjusted to needs for trained manpower in the agricultural sector. This is a very crucial problem which retards extension development in new countries.

Because of the scarcity of agriculturally trained men in developing countries and the difficulty of working in the rural areas it seems that at present and for many years to come, extension services will have to recruit field workers from among graduates of intermediate level agricultural schools. However, the graduates of these institutions are often stuffed with generalities, have incomplete agricultural training and aspire to white collar jobs. This situation is due to three main deficiencies: (1) present entrance requirements and procedures in selecting students, (2) insufficiency both in number and quality of teaching staff and the lack of training facilities, and (3) the prevailing idea that agricultural training at this level can be similar to college training but with a much simpler content.

In view of these deficiencies and until secondary education spreads in the rural areas, extension services should set standards of educational qualifications in keeping with the present situation and rely upon comprehensive programs of induction training before placing new recruits in the field.

Extension services very often must employ part time or full time technicians to teach special skills to farm youth and adults. These may include farm mechanics, carpenters, electricians, farm products processing technicians and other such skilled workers. Extension field workers may not have the competence or the time to teach such necessary skills. These technicians are usually locally recruited to conduct schools and teach evening courses in the repair and maintenance of farm equipment and farm buildings, carpentry and concrete work and other special skills which technological development makes necessary for farm people to have.

These technicians should know the skills they are to teach as well as the technical information farmers require in order to master the skills taught.

Technicians to be used for training farm people should have a proper standing in the community and maturity to command the respect of the trainees. Last but not least these trainers should have the inherent abilities of good teachers even though they have had very little schooling.

Extension field workers should be on watch for such qualified technicians and use them according to the needs of their programs. The training of technicians should be of special concern to extension services. Special short courses may be organized from time to time by regional extension services to train technicians to be used as needs arise. The specific objectives of this training will determine the length and content of the courses and the equipment and methods to be used in conducting them.

Liaison and Cooperation of Extension with Organizations Contributing to Rural Development

Liaison and cooperation with agricultural research and educational institutions, and other government and semi-government organizations in rural development have already been emphasized as major responsibilities of the extension organization. Our purpose here is to draw attention to the fact that extension should also recognize the important role it can play in rural development and in such local bodies and rural groups as community councils, farm cooperatives, farmers' associations interested in the promotion of a commodity, and other rural organizations with similar objectives. The need to deal more effectively with social and economic problems provides the incentive for people to organize themselves into groups having common interests and objectives. People, therefore, should not only be able to understand their problems and be willing to cooperate, but must know how to organize themselves and properly run their organizations. To this is closely related the development of enlightened leadership which is a major responsibility of extension. New and improved practices can be promoted much faster and more effectively through the organized effort of farm people, once the new techniques have been proven economically sound and have gone beyond the demonstration stage. Improved seeds, fertilizers, chemicals and modern equipment services can be supplied by cooperatives. Artificial insemination services can be provided by breeders' associations. Community improvement projects in which local clubs or groups are interested can be promoted in cooperation with community councils through well-integrated and balanced community development programs. This affords an opportunity to integrate extension projects and activities into the rural development programs. Extension workers must strive toward strengthening and coordinating the activities of all groups to the mutual advantage of the people concerned. Pertinent information and facts provided by extension will help members of such groups understand their problems and make wise decisions in solving them. This policy should be particularly emphasized when conflicting interests and controversies arise in a community. The extension worker should stand by the facts and not associate himself with either side of a controversy. When conflicts arise between farmers' organizations and private interests, it is well to remember that both sides have an equally important role to play in improving local conditions.

Opposition to plans for strengthening the extension organization and making it more effective may be encountered from high ranking executives within ministries of agriculture and other public organizations because of conflicting interests. Adjustments and compromises have therefore to be made. It is a challenge to the extension leaders to obtain the support of rural groups and political leaders strong enough to overcome opposing interests and ensure the survival and development of the organization.

Extension Personnel Management

The human element is a key factor in the effective operation of public services. Public administration places great emphasis upon standards and procedures concerning the classification of posts, salary scales, recruitment, staffing, efficiency ratings, promotion, training, discipline, hours of work, vacations, health and medical care, separation procedures, pensions and other conditions governing the employment of civil servants.

In the extension service,an educational organization aiming at changing the behavior of rural people, the importance of the human factor cannot be over-emphasized. The realization of the aims and objectives of extension depends to a very high degree upon the quality of extension personnel and the interest, zeal and spirit with which they discharge their duties. This means that employment and working conditions for extension workers should be such as to create an atmosphere conducive to self-realization and satisfaction in working with farm people, and cause them to look upon their jobs as life careers. When there is a personnel officer or division in the ministry of agriculture which is responsible for the uniform application of regulations, standards and procedures, the extension administration is responsible for matters concerning extension personnel. It must cooperate with the personnel service of the ministry in order that decisions made in the framework of public administration standards and procedures do not hamper the development of the extension program but, on the contrary, help the extension administration to maintain good relations with its personnel, make them part of the system and keep their morale high. The role of personnel services in the past has been restrictive, in uniformly enforcing civil service laws and regulations rather than in adopting a positive and cooperative approach towards recognizing individual differences and needs among employees and applying rules and procedures in the management of personnel in such a way as to promote employee cooperation and hence increase their efficiency. To counteract this situation there is now a tendency to let every organization deal with its own personnel administration. In a fully grown extension service employing a large number of workers, all personnel matters may be more effectively administered through a special extension personnel office. The duties of such an office would rather complement than overlap those of the personnel division of the ministry and, by creating an atmosphere of understanding and cooperation with this division, would help in making wise decisions in personnel management. On the other hand, being closer in ideology and action to the extension staff who operate the program, this office can more easily convince the staff that extension personnel problems have also to be looked upon within the context of civil service rules and procedures. In any case, the extension administration should accept full responsibility for any decision taken with regard to the management of its personnel.

All personnel matters and particularly those of recruitment, placement, transfers, efficiency ratings, promotions and training should be considered in the light of the needs of the program, after objectively appraising the competence, integrity, loyalty, personal characteristics and needs of extension workers. Each decision should protect the service as well as the prestige of the workers and satisfy their particular needs as much as possible, thus keeping high their morale and confidence in the administration. Uniformity in policy and equity in handling extension personnel matters are, therefore, essential and afford a way to limit political and outside interference, and dissatisfaction and rivalry among the personnel.

In extension, as in any public service, personnel management is affected by several factors within the organization and by a wide range of influences from without. They all affect the behavior of staff members and workers. Thus the organization encounters not only individual resistance but quite often group resistance to its influences. The extent to which such resistance will be overcome depends a lot upon the uniformity in policy and the skill with which procedures in managing personnel are applied. In general, the more extension personnel are responsive to their leaders, believe in extension philosophy and aims and have confidence in the administration, the easier it will be for administration to smooth out differences and maintain a unified organization. Interest in extension work and pride in the organization, to the extent that personnel identify themselves with the aims and objectives of extension, are the two important attributes which an extension administration should strive to develop among its personnel.

Frequent group consultations with chiefs of bureaux, supervisors and extension specialists afford the director with an opportunity not only to correctly appraise situations in relation to personnel matters but also to develop among the staff a democratic and cooperative spirit. Group consultations also build morale and permit the group to share credit for decisions taken. Stating objections in advance prevents decisions, which are difficult to change or withdraw, from endangering the prestige of the administration. Because of their importance in extension personnel management, recruitment, placement, transfers and promotions are briefly taken up in the following paragraphs.

"The basis of a sound public service and of the public service career is the way in which personnel enters the service." 1/ When the various posts within the service are classified and the merit system in selecting and appointing civil servants has been adopted, the recruitment as well as the placement, transfer and promotion of the various categories of extension personnel are much facilitated. Competitive examinations and/or seniority in obtaining the agricultural school or college diploma, age limit, physical fitness, basic education, farm background and other requirements for admission to the service, are usually stipulated by civil service laws and procedures. Their application is the responsibility of the ministry personnel office. Extension administration must cooperate with the personnel office and make sure that related procedures are properly interpreted and applied. Recruitment programs are much more efficient if they are the joint responsibility of the ministry personnel office and of extension administration. They must be drawn up with consideration of the number of posts which are vacant, extension service plans, and needs for additional personnel, the number and kind of candidates to be attracted, the number of secondary school and university-level agricultural graduates looking for employment, existing employment opportunities for such agricultural graduates in farming, related occupations and other competing government, semi-government and private organizations, as well as existing inducements for entering the extension service. Among these, the most important to consider are the particular exigencies of the extension job itself, working conditions in extension, salary scales and opportunities for advancement in a career in the ministry service. These latter are related, other things being equal, to the proportion of the field posts in which extension personnel will start their careers, to the number of posts of chief of bureau, supervisor and extension subject matter specialist as well as the number of similarly classified posts in other ministry services, such as posts of junior research worker and director of service, to which eventually all extension workers should have access after serving a certain number of years in the field. A commendable practice, particularly in new countries, would require all agricultural officers entering the ministry service, including research institutions, to start as extension field workers and after at least three years of service in the field to be eligible for promotion and placement in other extension posts as well as other agricultural services and institutions. Such a policy would not only make it possible to treat all junior agriculturists entering the ministry services on equal terms, but, more important, give them an opportunity to get first hand understanding of farm people's problems and their points of view. Furthermore, this policy uniformly applied will help the administration to cut down the prevailing tendency of young appointees to start their careers from the regional and central services located in cities instead of from the villages. The correction of this situation could be one of the most important contributions extension could make in building more effective agricultural services in the newly developing countries.

In extension, as in any other active organization, a process of selection constantly takes place among personnel, and is due to various inter-acting factors, some of them found within and some others without the organization. For example, an extension field worker might after one year of work decide to resign because he has found a better paying job in a nearby town where his wife prefers to live, another may ask to be transferred to another job in the ministry which better suits his temperament, while a third one is aspiring to be appointed to a supervisory post and is studying a foreign language in order to be eligible for special training abroad. The problem which the extension administration constantly encounters is how to guide and facilitate this selective process in order that the right type of person, having the desirable qualifications and meeting the standards set up for a particular position, can be eligible and placed in that position. Placement, transfers, selection and promotion therefore, together with counselling and training, are the means at the disposal of the administration to facilitate and guide the selection of personnel to suit its goals. This obviously cannot be done symtomatically and with routine procedures. It has to be done in the framework of a properly conceived plan for personnel development. Such a

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1/ Training and Administration of Personnel in the Public Service. United Nations Report ST/TAA/m/10, p. 29.

plan requires making projections of the expanding needs of the program in the various categories of personnel for a number of years ahead and in raising its professional standards in line with the broadening scope of the extension programs. Examples include the creation of a number of positions of chiefs of extension bureaux in regional services as a result of separation of supervisory and administrative functions on the regional level, or an increase in the number of posts of extension supervisors and subject matter specialists to cover new fields like farm management. The training abroad of well selected workers as specialists for newly initiated soil conservation or nutrition programs are examples of objectives to be achieved with personnel development plans. It is difficult to conduct extension personnel development programs in some developing countries because of weaknesses in administration, division of interest and the antagonism of other divisions and services. This is especially true with regard to the filling of posts of extension supervisor and specialist with specially trained extension workers. Very often they are transferred to other services and agencies.

Special problems also arise in providing opportunities for advancement to local extenison workers who in developing countries are graduates of intermediate agricultural schools and do not have access to higher posts for which a college degree is required. This problem requires special attention if the morale of this category of extension worker is to be kept high. It is a good policy, apart from promotion to higher grades and salary scales on the merits of achievement, to provide local extension workers with opportunities to advance in the ministry cadres, after successfully completing certain training requirements. For instance, senior, well selected local extension workers can be appointed as chiefs of extension districts or assistants to chiefs of extension in regional services.

The behavior of each worker is controllable within rather narrow limits and is subject to a wide range of influences lying outside the organization. This means that adjustments and changes in the plans for personnel development will inevitably have to take place in view of urgent and properly justified individual needs, problems which sometimes arise from a clash of personalities, for reasons of discipline, in order to protect the prestige of the service and of the worker himself. Quite often compromises will have to be made in planning, transferring and selecting personnel for training and promotion on account of outside pressure and personal factors involved. In handling difficult personnel problems, the extension director and his staff should take a long term view as regards the needs of the service for well qualified personnel and should, to the extent possible, objectively judge each case on its merits.

Transfers to posts of the same category and level are desirable insofar as they help to provide opportunities to the workers to broaden their experiences but need to be done carefully to avoid disrupting the work. This applies particularly to field workers who must not lose the momentum gained in developing personal contacts and good working relations with farm people in their areas. Transfers to higher posts which are linked with promotions are of course inevitable and should be done in keeping with personnel development plans.

Placement and transfers of personnel in positions within regional services can be decentralized. Authority may be delegated to regional directors of agricultural services to place and transfer extension field workers according to the needs of the program after consultation with regional supervisors. Such a policy will relieve the central administration from a burden, but it should be kept in mind that regional officers are more subject to outside pressure than the central administration. For this reason key extension personnel should always be placed and transferred by the central administration.

Evaluation of the efficiency of extension personnel in discharging their duties and responsibilities is a prerequisite of sound management. Since evaluation should be based on work accomplished and concrete achievement it is closely related to the evaluation of extension programs. When rules and procedures for the evaluation of the efficiency of civil servants and their promotion in grade are uniformly applied to all services through personnel offices, it is the responsibility of the extension administrator to make sure that efficiency evaluation reports, efficiency ratings and other pr cedures are properly interpreted and applied, particularly when used as a basis for the promotion and advancement of workers. In this connection it should not be forgotten that the value of efficiency evaluation reports and ratings is relative since many of the factors on which evaluation is based are subjective and reflect the set of values the person who writes the report is looking for, even though an effort is being made to apply identical criteria in judging the efficiency of each category of personnel. For this reason it should be stressed again how important it is for the extension director to form his own opinion through day-to-day personal contacts, visits in the field with staff members and particularly the directors, chiefs of bureaux, of regional services and supervisors. He will then be able to appraise on their merits their opinions and judgments in evaluating the efficiency of the field workers.

In conclusion, it should be emphasized that the extension administration should recognize its limitations in exercising authority in handling personnel matters. Therefore, provision of leadership, cooperation and guidance at all levels should be the policy in personnel management, rather than controls and authocratic decisions which are not at all in keeping with extension's philosophy.

Office Management

In business organizations as well as in public services central emphasis is placed on the role played by office work. Administrative decisions and the proper operation of the primary activities of any organization depend upon communication of information within and outside the organization. Effectiveness in serving the administration at a reasonable cost in relation to the service rendered is the most important consideration in office management. In extension as in any other public service the organizational pattern determines the office units and their level. If for example the central extension organization branches into bureaux of agricultural extension, home economics, youth extension work, personnel training and so on, respective office units are set up to perform the work required by these bureaux. Thus it should be clear that office work is not a function but a process or a group of processes for carrying out and facilitating the work of functional units of the service. It is in this respect only that office work can justify its existence. This means that while the extension bureau in the central extension services needs sufficient administrative and clerical staff to properly operate the program, a regional supervisor requires only secretarial help to the extent his advisory and training functions demand, while a local extension field worker may not even need a secretary. Furthermore we must remember that office activities should be performed in the administrative units needing them and should be integrated as completely as possible with the main functions and activities they are to serve. Therefore every extension officer who has administrative functions such as chief of bureau is an office manager and has to devote part of his time to managing the office phase of his work.

Improving and simplifying office procedures and keeping red tape to a minimum is an important objective of extension administration. However, it is vitally important that the office of each unit be adequately staffed. This requires that the total office work to be done is broken down into clearly defined tasks. A common error in determining requirements for staff and clerical positions in extension organizations is to underestimate the amount of office work required by its various units. Consequently, they are understaffed both in number and quality of technical and clerical personnel. Thus a crippled organization is created from the beginning. Another common error is to have technical personnel share the services of the same secretary or clerk. Consequently office work is seriously hampered and extension staff members spend much of their time doing routine work to the detriment of their main functions. Typing pools and duplicating machines can be used advantageously by several office units provided the work of the personnel engaged in these activities is properly supervised.

Effective office precedures save the time of the extension and clerical staff in preparing letters, memoranda, forms, reports and other documents for internal and external communication, in recording, in assembling and processing facts and information, in filing and record keeping. Each office unit chief should be on the alert to improve the efficiency of office work and to eliminate unnecessary paper work. Each bureau chief should establish a reporting system for his staff members that is clear and well understood. Clear reporting relationships also help motivate clerical staff and build interest in their day by day work. Many tasks in office work become routine and can be effectively and easily completed if the proper procedures are adopted and understood. In general it is preferable that the staff of each office unit carries on its own work and keeps its own files with the exception of duplicatory, and handling incoming and outgoing mail. These are usually centralized to better serve the entire organization.

The location of the building where the central extension service is housed ordinarily does not create any special problems for the director of extension since the service is usually located in the ministry of agriculture building. The cases of the bureau of extension and of supervisors on the regional level are similar because they are also part of a regional agricultural service. But in some cases when the extension service is newly established, there is not enough space in the ministry building and special quarters have to be provided. In such instances the extension administrator must make some decisions with regard to the office building, its location and layout. The major factors to be considered in relation to office building, space and location should be facilitation of working processes, provision for employees comfort and health, accessibility to employees and the general public, distance from the ministry of agriculture, flexibility needed for the future growth of the service and costs in proportion values gained and within the limits set up by the administration. The same factors apply to the regional agricultural services including extension bureaux, except that the accessibility of the office to the public and particularly to farm people is much more important. This is even more important with regard to the location of the district and county extension offices.

Planning the layout of offices and the rational utilization of the total floor space in the building should follow the organizational pattern. The chief of each bureau and his assistants should be located in private rooms with an adjacent room for clerical staff. In this way each office unit will be separately located to carry on its own work. There is presently a trend in business organizations to adopt the layout of large open areas for office operations and place supervisors and chiefs of services together with the staff. When some degree of privacy is needed for administrators simple partitions are used thus saving considerable office space. The use of this kind of layout for public services which like extension do not serve the public on their premises but in the field does not present any advantages. It is preferable to adopt the private office layout, at least for the extension staff and chiefs of bureaux. They will then be better able to concentrate on their work and have the necessary privacy in conferring with staff members. Typing pools, duplicating machines and the handling of mail need to be arranged with ample space for each employee and the layout of desks and equipment in all office rooms should be designed in relation to lighting, ventilation and the movement of personnel. A large conference room, preferably adjacent to the director's office, is an essential element of office layout. Staff and other meetings can be held in such a room and it also can be used as an exhibit room. Meetings with visiting groups and other officials will often need to be held at the organizations headquarters.

It is difficult to say to what extent the quality of office equipment increases the efficiency of employees. However, machines have revolutionized office work and have made clerical tasks easier, faster and less costly. The use of well selected office furniture, equipment and machines adds a lot to the atmosphere and may serve as an incentive in stimulating office personnel to do better work and increase their efficiency. It is therefore quite important that central and regional extension offices should be adequately furnished and equipped with desks, chairs, filing cabinets, shelves, tables and other items as well as with the necessary typewriters, duplicating, adding and calculating machines. However because certain office machines are very expensive it is necessary before buying them to be sure that the work cannot be done as effectively by some simpler means.

Transportation presents special problems for the extension organization because unlike other public service personnel, extension workers must travel and move freely in rural areas in order to discharge their duties effectively. This holds true for all categories of extension personnel including the director of the service, but more so for the local extension workers, who must visit villages, farmsteads, fields, orchards, processing plants and other places in carrying on the activities of the program. Adequate transport is therefore a prerequisite for effectively using extension manpower and reaching farm people.

In a country where there is a good system of country roads and all rural centers and farmsteads are accessible by car, transportation is less of a problem because extension workers can use public transportation as well as their own private cars and be reimbursed by the service on a kilometer basis. This arrangement is adopted in most advanced countries where there are good country roads and practically all government employees have their own vehicles.

In less developed regions, however, the problem of transportation for extension personnel is much more complicated and presents certain aspects which are often the determining factors in establishing extension districts, in grouping villages to be served by extension workers and in selecting the center where he will be located.

In densely populated rural areas where villages are very close and the distances the extension worker has to travel every day to reach farm people are very short, local extension workers may walk or use a bicycle. When there are long distances to travel and where many of the villages are inaccessable by car, particularly in wintertime or rainy seasons, extension workers can travel by bus or car only to villages located on main roads and have to visit most of the other villages in their district on foot or by horse carriage. To encourage frequent visits to rural areas, some newly established extension services have equipped regional and county extension centers with government vehicles and drivers. Apart from the many difficulties which arise in maintaining these vehicles in operation and operating automobile pools effectively, the greatest disadvantage is that it requires extension workers to reside in urban centers out of their districts, far away from the villages and the people they serve. However this scheme has definite advantages in providing transport to agricultural officers conducting field rat and locust campaigns, in distributing seeds and fertilizers and carrying on certain other action programs. Another solution which has been tried in some developing countries is to allocate cars - usually jeeps or land rovers - to individual workers and make them responsible for driving and maintaining these cars in good order. This scheme even though calling for a substantial investment on the part of the extension service meets the needs of extension workers much more effectively and at a much lower cost than the previous one. This kind of arrangement can be considered as a step towards the solution of the transportation problem and until government services can adopt the policy of allowing employees to use private cars, possibly encouraging them to purchase their own cars through a loan scheme. With the steady improvement of road systems in developing countries, extension administrators should direct their efforts towards such rational solutions of the transportation problem.

Extension services and particularly extension workers responsible for carrying on the program in the field need books and reference material, some special equipment, materials and supplies for conducting demonstrations, meetings, study tours, evening classes, skill schools and other educational activities. The kind of equipment and supplies necessary in carrying on these activites will vary with the prevailing conditions and the program set up by each extension worker. Especially in less developed areas, extension field workers need to have on hand some simple equipment and tools not only for conducting extension activities but also for helping them to make better contacts and win the confidence of farm people. Such special equipment might include:

hand magnifying lens
soil sampling auger
kit for quick PH, phosphorus, potash and lime tests in soil

pruning shears and other horticultural hand tools
trocar
a syringe for innoculation
running decameter
slide and film strip projector
blackboard
camera
flannelgraph, maps, charts
collections of seeds, chemicals, insects
other exhibits and simple teaching aids.

In most cases the latter can be prepared by the extension worker himself to suit his particular needs. This list is by no means exhaustive but rather suggestive of the great variety of equipment and supplies that may be needed by an extension worker in implementing his program. Hand dusters and sprayers, seed testing equipment, insect traps and other agricultural implements and tools must be on hand for conducting demonstrations when needed. In this connection it should be emphasized that according to sound extension procedures, tools, implements and machinery for conducting demonstrations should be made available by the cooperating farmer himself, since in no case should a new technique or farm practice be demonstrated if it requires expensive pieces of equipment which farm people find uneconomical to use or cannot afford to buy. Extension workers should also be provided or still better must be allowed to purchase and have on hand, all the material and supplies they need to prepare charts, maps and other visual aids as well as for conducting method and result demonstrations and other training activities. This might include spray materials, all sorts of chemicals, vaccines and innoculations, seeds, grafts and seedlings, plastics and other materials.

Financing the Extension Program

In countries where extension work is a state responsibility carried on through an extension service established in the framework of the ministry of agriculture, the law setting up the extension organization normally authorizes this ministry to include in its budget the funds to cover necessary costs. These costs usually include all expenditures for salaries and allowances of extension personnel, transportation, office rent, equipment and supplies, and equipment and materials for operating the program in the field. In certain countries the financing of extension is the joint responsibility of national and local bodies and farmers associations. In still others financing is the responsibility of farmers organizations which are also responsible for operating the program and receive subsidies and grants under certain conditions from the state budget. In the United States extension work is financed cooperatively by the states, counties and the federal government which through federal grants in aid provides financial assistance under certain conditions amounting up to 50% of the total expenditures for extension. 1/

The way extension work is financed in a country reflects to a large extent the degree to which local bodies and farm people are interested in the program and the importance they attach to it as a means for raising rural standards. State participation in financing the extension program is also a recognition of the contribution extension can make to rural development and at the same time serves as an inducement to rural institutions and farm people to be interested and cooperate in the operation of the program. Furthermore the joint financing of the work by state and people automatically asserts the best possibly accountability to the general public for the funds spent and thus increases its faith in and support of the extension organization. For these reasons even though extension might be a public service financed entirely with public funds it is highly desirable that rural people through local bodies and organizations should participate as much as possible in the financing of the

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1/ L. D. Kelsey and C. C. Hearne. Cooperative Extension Work. Chapter V.

program or of certain parts, activities and projects in which they are particularly interested. Contributions of county and community boards and women's and farmers' associations for the development of home economics and of certain agricultural projects are examples of such joint financing.

When extension is a governmental organization, budgeting, disbursing and control of the use of funds has to be done by the administration in conformity with state policies and procedures. It is the responsibility of the extension administration to prepare and submit to the minister of agriculture or other competent body its budget for the fiscal year including all proposed expenditures for salaries, allowances, transportation, office rent, equipment and supplies as well as any other expenditures for operating the program. In completing the budget, appropriations of state funds, subsidies and contributions to be made by local bodies and rural organizations participating in the financing of the program should be included.

Where public service budgets are approved on a functional basis the extension budget amounts for each category and project are incorporated under separate sections with an appropriate heading leading into the ministry budget. Salaries and allowances of field workers and supervisors, personnel training, equipment and supplies for central, regional and local services, travel of every category of personnel, materials and supplies for demonstrations and other education activities are included. If the standard practice is for every ministry to present a budget broken down by categories of expenditures for all the services of the ministry such as salaries, travel of all personnel, equipment and supplies, then all extension budget category and item estimates are molded into the respective ones for the whole ministry. In that case, after the approval of the ministry budget, finance authorities have to make adjustments and allocate the available funds to each service within the total funds approved for every category of expenditure. The most serious disadvantage with such a practice is that this kind of centralized budget does not clearly indicate the objectives and needs of programs for a particular fiscal year new funds are to be spent in achieving particular targets. Neither does it provide a basis for the evaluation of the work accomplished in relation to funds spent. On the other hand the ministry administration has much more flexibility and freedom in making adjustments in the allocation of funds during the year.

In the case of a community development type of organization the drafting of its budget can easily be done on a functional basis and it can be presented together with its program and targets to be reached in the particular fiscal year. An extension organization which is sponsored and maintained by rural organizations and local bodies has the same advantage. In view of the many advantages a functional budget presents, the extension administration should not only present a functional budget together with its program but also strive towards having it approved as such by the competent body.

Procedures for dencentralizing as much as possible the financing of the extension program by allocating the funds for all categories of expenditures to regional services and authorizing them to disburse and spend the funds in keeping with the provisions of the budget are extremely important. The extension program cannot be operated effectively if those responsible at the regional and local levels do not have at their disposal the necessary funds as well as the authority to disburse them to meet the needs of the program. The related precedures have to be worked out by the extension administration in keeping with the rules and regulations for the release and disbursing of funds enforced in each country. Frequently the release and disbursing of funds is the responsibility of a central finance authority. Formalities and delays may make it practically impossible for extension workers to have materials and supplies they need in time for their use in carrying on their activities. This difficulty may be overcome by establishing a revolving fund in each regional service and authorizing a finance officer to make payments for expenses duly approved by the chief of bureau and the director of the regional service.

Where financing is decentralized and procedures are established on the regional level for disbursing funds, the central finance office of the extension service may put the necessary funds at the disposal of each regional bureau at the beginning of each trimester in proportion to the funds allocated for the fiscal year and require an account of expenses incurred the previous trimester. In this way the extension finance office can closely follow the execution of the budget in respect of funds allocated to regional services and ensure the financing of the program without any serious delay.

Controls are necessary in the execution of the extension budget and in spending public funds. They are exercised by the public financing authorities in keeping with rules and procedures applied uniformly for the control of all services authorized to spend public funds for a particular program. The important point to be made here is that the extension administration should not only assume full responsibility for funds appropriated for extension and those contributed by local bodies and rural organizations, but must be in a position to account for the funds spent and prove through its annual report, an evaluation of work accomplished, that funds were properly spent and expenditures were justifiable in order to achieve the objectives of the program. For this reason the proper controls should be exercized by extension administration to make sure that the funds allocated to each regional service were spent in conformity with the rules and procedures set up for financing the work and that great care was exercized to avoid unjustified expenditures and waste of funds. This is absolutely necessary in order to establish for the extension service a high reputation and prestige as a public organization.

Staffing an Agricultural Extension Service [1]

The kind and number of personnel required for manning an extension service will vary and must, in the final analysis, be determined by the simplicity or complexity of the extension program, by the number of clientele served, by the diversity of the clientele served, and by the relationship of those factors to the problem of maintaining effective organizational communications. Any projection of staff requirements made in this presentation must be assumed to be flexible and adjustable enough to fit into local, state and national conditions. In the earlier years of the Agricultural Extension Service in the United States the primary organization was a straight line situation having at its head an administrative and supervisory director; having also extension specialists; and agent leader; a home demonstration leader; sometimes a youth leader; and field extension agents. Some such simplified personnel structure may still be applicable in certain national environments, but probably not for long, since technological change and development in foreign countries may be much more rapid than it has been during the earlier years of extension's existence in the United States. As field extension staffs increased in size and complexity, supervisory control became necessary. Districts with head supervisors were created to solve this problem. And with the division and promulgation of district supervisory and specialist positions in extension, there followed a change in the relationship and communication patterns between field and state level staff.

"In more recent years (in the United States), increases in the size of country and state specialist's staffs, the need for more specialized leadership in program development and coordination, and the additional administrative workload have created the need for staff type positions at the state level. These include positions such as state program leaders in agriculture, home economics, or youth programs, as well as assistant director positions."[2]

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[1] D. Roman J. Verhaalen, Dean of the Extension Service, West Virginia University, Morgantown, West Virginia. Portion of a paper presented at an annual agricultural seminar in Tunis, February 14 - 18, 1966.

[2] Tom Lavery, Heckel and Johnson, Developing Job and Position Descriptions in the Cooperative Extension Service, National Agricultural Extension Center for Advanced Study, University of Wisconsin, Madison, Wisconsin U.S.A. 1965. Publication No.21, p.7.

The increasing complexity of the extension organization and its greater line of communication further created the need for certain staff support units such as those in personnel training, basic communications methodology, program development and planning, and fiscal management.

The foregoing thus briefly describes the gradual evolvement of personnel requirements as the extension service moved from a simple to a complex organization. Where on this continuum one finds the specific personnel requirements of a particular extension service depends on the national conditions, on the program needs, and on the sophistication of the program which is developed.

To simplify a determination of the kind and qualifications of staff needed, one can categorize personnel requirements starting with the local level; variations can then be applied by the elimination of certain levels, depending upon the simplicity or complexity of the organization required:

1. Field extension worker	extension agent home demonstration agent youth agent
2. Area extension worker (or district)	Area administrator or supervisor Area agents Area specialists
3. State extension worker (or national)	Administrative officer and assistants Subject-matter specialists Communications specialists Training specialists Program leaders and supervisors

Each of the three levels indicated can generally be assumed to require a higher level of training and specialization, whether it is in educational methodology, training expertise, communications methodology, or subject matter sophistication. The field level qualifications are utilitarian, personal contact and human relations oriented. The area level positions are supervisory, middle management, and subject matter knowledge oriented. The state level positions are academic and research service, training support and communications service, and administrative-management service oriented. Each is to some extent dependent on the other for fulfilling the extension process. Without either the field service or the supporting state level research, management, and specialist services, the extension process would lose its basic strength.

What should be the qualifications of these various extension personnel? Qualifications cannot be stated exactly for they will vary both in kind and level from area to area, from country to country. But some broad generalizations can be attempted:

1. Since the field agents of the extension service must deal with a wide variety of problems, they should have a wide familiarity with the subject matter of most academic disciplines in both agriculture and home economics. They should have a higher degree of knowledge in some subjects.

2. They should have a solid understanding of the sciences, particularly the natural sciences.

3. A working knowledge of economics and sociology is basic to extension work.

4. Naturally, the extension agent should be well skilled in writing, speaking and the use of other communications media.

5. He should have an appreciation of education, the arts, and the culture of the environment in which he will work.

6. He should know the techniques, the processes, and the methodologies which apply to adult education and adult learning; he should be able to relate these to on-the-job and in-the-time training.

7. He should first and foremost be interested in people, in their educational advancement, and in their individual learning abilities; his dedication to this concept should create in him a near missionary zeal to help people learn.

8. He must have a pleasant and outgoing personality, an ability to converse freely with, and to relate easily to, people of all walks in life; his aptitudes and his inclinations, his approach to people, and his empathy are as important as his subject matter background.

This is the field worker, a trained and skilled individual, a pleasant and outgoing individual, usually with no less than a Bachelors Degree and often with a Masters Degree, whose major roles are those of adult learning catalyst. agent of social and economic change, problem interpreter, and conveyor of general information with respect to agriculture, home economics, family living, and community development. The specialist, on the other hand, is best a person who has had some experience on the general level of training just described and some experience in the field work of extension, but who then moves on to specialize in such subject matter disciplines as livestock, agronomy, horticulture, dairying, nutrition, family and child development, youth education, sociology, community development, or others related to the complex problems of rural people. The specialist must have many of the qualifications of the field worker, but in addition must have the desire and the intellect to relate to higher levels of subject matter specialization and research. Other facets of personnel qualifications will become evident as roles of both field agents and specialists are discussed.

The Field Contact Agent

The contact agent in the United States is traditionally either a local extension agent, a local home demonstration agent, or a local youth agent. In West Virginia, USA, and some other states there is another category of agent and specialist, the area agent and the area specialist. Increased complexity of agriculture and rural life in the United States and increased technology, mechanization, competition, and the need for more specialized resources made these intermediates essential.

A strength of the United States system of agricultural extension is the fact that it is administratively and subject matter-wise related to an institution of academic learning which carries on resident instruction and researchin the academic disciplines from which the extension service draws its information and knowledge for dissemination to its clientele. Accepting this premise makes it easier to define the role of all extension workers.

In that context the field contact agent serves as liaison representative between university and the rural public; he serves as an educator, an agent of social and economic change in agriculture, home economics, and rural life; he is considered a respected and accepted community leader, knowledgeable about all university resources with proficiency in rural oriented subject matter, in the foundations of adult learning and extension teaching methods, in human relations, and in problem solving. He is not only an individual or group teacher of adults, but also the person who makes it possible for rural people to identify, seek, and obtain the educational resources needed for their own development and for that of their agricultural enterprise. He is a purveyer of knowledge. He is primarily responsible for working directly with clientele. It is his task to assume a leadership role in developing the total agricultural resources in his locale. His duties are primarily those of informal education and the organization of various extension activities which will contribute to educational growth.

Specific duties of the local agricultural extension agent are: (1) to establish himself in an educational leadership role in agriculture and other areas of competence; (2) to serve as an organizer of activities supported by specialists in those areas where his own training does not permit sufficient competence; (3) to organize groups in such a way that learning, planning, and action takes place; (4) to extend the scope and effectiveness of the local extension program by finding, developing, and recognizing local leaders; (5) to maintain an effective public relations program; (6) to reflect interests and needs of his clientele to specialists and research staffs; (7) to keep up to date professionally by carrying out a personal program of continuing education and self improvement; and (8) to maintain an accurate system of records and reports in order to assist other extension personnel make a better contribution to his local program.

The role of the home demonstration agent has a similar emphasis but in: (1) developing the human resources, community evolvement, and social advances of the local extension program; (2) in working with individuals, families, key leaders, and groups for interpreting educational programs of assistance to women and family life; (3) in carrying out an educational program for social and cultural advancement; and (4) in keeping up to date as a home economist and professional worker for women.

The role of the local youth agent is: (1) to assume a leadership role for developing informal extension programs for youth; (2) to involve volunteer leaders and youth in a program of active educational endeavor; (3) to train adult leaders and to arrange for them to work with youth programs; (4) to develop program materials and activities based on the needs and interests of youth at varying age level and developmental stages; (5) to cooperate with other educational youth groups in the development of a total program for youth in the locale; and (6) to engage in a continuing self-improvement educational program.

It may be worthwhile reiterating the earlier statements with reference to a field agent's pre-service training. As a general rule he should have completed four years of college work in the subject areas previously noted. As the extension program becomes more complex and as clientele needs become more technical and specialized, a Masters Degree becomes an imperative. Although basic technical or vocational training is assumed sufficient by some countries, this writer feels that this should apply only to sub-professional aides, and not to the professional extension agent, he needs more than a mechanical knowledge of the subjects which will be his concern. He needs both factual and theoretical information, an understanding of the theory and the more general educational background which permits rational, critical, and analytical decision-making. Such expertise does not normally accrue from a narrow vocational-trade school education where he may learn the skills but not the reason why.

The Subject Matter Specialist

The specialist has primary responsibility for subject support of the local area state extension programs and for the training of county agents in a specialized subject matter or program field. He normally has only secondary responsibility for direct contact with clientele, except insofar as he works with such related clientele groups as the Livestock Producers Association, the Vegetable Growers Association, or the Cooperative.

The specialist interprets research findings and provides technical knowledge related to the actual practices and techniques of production, marketing, and utlization of agricultural products in his area of expertise; he assists in the analysis of problem situations with respect to his subject matter competence; he provides factual information relevant to motivation of people, changing attitudes, and how to organize best for educational activity and action. In general his role is that of supporting, strengthening, and complementing the activity of the local agent. Subject matter leadership is centered in the specialist; thus, he serves as a resource person for the field agent, he evaluates new technology with alternatives in subject matter and teaching methods; he prepares literature and other teaching materials for use by both adult and youth clientele of the extension service. He plans and outlines projects for use by extension field personnel and lay leaders.

He trains county extension personnel both in subject matter and adult education methodology. He cooperates with governmental and professional agencies, with voluntary organizations and with industry in planning and carrying out appropriate practices and new ideas in his area of specialization. He interprets and transmits the specialized needs of clientele to researchers for further study; he maintains a constant flow of information related to his field over the mass media channels which are relevant to the clientele using newspapers, bulletins, radio, television, and other meaningful communication means.

As the level of technological sophistication and need in agricultural production increases, the specialist must become increasingly more specialized and knowledgeable in his subject area. The resulting hazard can easily be an increase in communication's difficulty between the specialist and the agent he is supposed to support. Home economics and other non-agricultural specialists have similar responsibilities but in terms of their own subject matter.

The subject matter specialist is a staff rather than a line employee; he is not a member of the supervisory, management, or administrative team. He can be compared to the teacher or professor at the college with responsibility for adult teaching methodology and for subject matter information; he relays this information to secondary source instructors (the field agents and the lay leaders). Although often partly responsible to an extension supervisor or extension program coordinator he is and should be directly responsible to a college subject matter department, where he is most apt to receive the sustenance, assistance, and knowledge resources of research and teaching colleagues related to the academic discipline for which he has responsibility. Through such working relationships the extension service materially increases the breadth and depth of the subject matter resource at its disposal for dissemination to its clients.

Criteria for Extension Supervision [1]

Supervision is a process by which workers are helped to do their jobs with increasing satisfaction to themselves, to the people with whom they work, and to the agency.

Extension supervision is concerned with the improvement, or growth, of extension personnel as individuals and as educational leaders. In contributing to individual growth, the goal of supervision is the maximum development of the potential capacities of the agent as a person. In contributing to the effectiveness of the worker as an educational leader, its goal is to provide the best possible extension program for the people of the country.

Criteria for supervision were identified by a review of literature from the fields of education, including extension, and from industry and voluntary agencies. Nine criteria were chosen for validation. These were submitted to a panel of 15 experts selected from State Directors of Extension and Leaders in the Federal Extension Service. Only criteria accepted by three-fourths of the panel of experts were used in the study.

Criteria alone can be rather abstract statements. It would be difficult to determine whether or not supervision met the criteria without clarifying general terms by using concrete or specific examples of activities and practices. Through activity and habitual practice, supervisors live out the process which we call supervision and demonstrate the extent to which they meet criteria. For each criterion, a list of 3 to 17 activities or practices was delineated.

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[1] Mary L. Collings - Extracted from Extension Supervision Part II, Criteria and Performance - Federal Extension Service, United States Department of Agriculture

Criterion I - A good supervisor is guided by clear purposes. He defines purposes through such actions as:

1. Analyzes with agents current county programs in terms of significance of problems attacked, number of people reached, and the extent of leadership involved.
2. Studies the findings from educational research having implications for extension.
3. Helps agents collect and interpret background information and make decisions as to program needs.
4. Helps agents work out a clear and comprehensive set of objectives for their work.
5. Helps agents plan methods and determine responsibilities for carrying out programs.
6. Assists experienced workers to plan for training of new workers.
7. Analyzes the changing demands upon the extension service and their effect on the role of the county extension agent.
8. Uses a written plan for supervisory activities including a statement of objectives and methods to reach them.
9. Writes a report of work accomplished for each supervisory visit to a county and uses reports to make plans for further work in the county.

Criterion II - A good supervisor guides agents to get the job done; to carry out the purposes of the agency. Guidance is given agents through such actions and practices as:

1. Introduces new workers to county and assists in making initial contacts.
2. Familiarizes new agents with working conditions in county.
3. Informs new workers of extension policies, procedures, and regulations.
4. Examines with agents the workload carried.
5. Helps agents determine priorities for time use.
6. Interprets administrative viewpoint to county workers.
7. Helps county staff understand how to use assistance of specialists and other resource people in program development and teaching.
8. Helps agents develop effective records and reporting techniques.
9. Prepares manuals, handbooks, and guides for agent training purposes.

Criterion III - A good supervisor makes a careful analysis of the needs of each individual agent. He concentrates his supervisory program on helping to meet needs. In practice he does such things as:

1. Observes agents at work and diagnoses improvements needed.

2. Analyzes extension programs county by county to determine status of work undertaken and need for supervisory help.

3. Makes an inventory of each agent's training needs based on previous training and demands of the job.

Criterion IV - A good supervisor makes supervision a cooperative activity. He draws on the ideas and experience of all staff members. In practice he does such things as:

1. Works out with county staff agreements concerning staff relationships and satisfactory working arrangements.

2. Works out with county staffs the function of each in overall program development.

3. Develops with county staffs working procedures which result in program integration.

4. Works out with agents and specialists plans for specialists' help in the county.

5. Reports county developments to administration.

6. Uses committees of agents to formulate objective criteria upon which to base judgement of an agent's work.

7. Uses committees of agents to assist in planning agent training meetings.

8. At beginning of agent training conferences, works out with all agents the agenda to be followed.

9. Through staff conferences provides opportunities for agents to share with others experiences gained through advanced study.

Criterion V - A good supervisor assumes responsibility to develop staff competence He motivates professional improvement. To this end, the supervisor does such things as:

1. Trains agents in job operations and standards.

2. Helps agents to get more results from farm and home visits, result demonstrations or office calls.

3. Helps agents improve the conduct of meetings, demonstrations or discussion techniques.

4. Helps agents write better circular letters and news articles, give better radio and TV programs.

5. Helps agents develop skill in using group techniques.

6. Helps agents make a plan to involve people in the process of program development.

7. Helps agents establish and use a definite plan for developing lay leadership.

8. Gives agents specific training on how to work with county extension committees.

9. Helps agents interpret and apply ideas and skills gained through training.
10. Helps agents expand or strengthen the county extension organization and participation of lay people.
11. Arranges for less effective agents to observe and participate in well-recognized county programs.
12. Plans with individual agents professional improvement goals.
13. Assists agents to work out individual plans for on-the-job study.
14. Assists agents to obtain from local boards favorable leave privileges for study.
15. Informs agents about graduate training opportunities.
16. Informs agents about study scholarships and fellowships available for them.
17. Brings to the attention of administrators employees who are capable of performing at a higher level.

Criterion VI - A good supervisor studies the extension job. He uses each activity of the job as practice in problem solving for the staff members involved. To this end, the supervisor does such things as:

1. Analyzes with county staff their functions, working procedures, and practices.
2. Helps agents and secretaries analyze county office organization, procedures, and housekeeping.
3. Encourages agents to work out for themselves solutions to minor problems.
4. Analyzes with county staff working habits and practices which will maintain good relations.
5. Studies with the agents their program planning techniques and ways to improve skills in
    a. Collecting and analyzing background date.
    b. Involving people in planning.
    c. Formulating objectives and making decisions as to significant problems to be worked on.
    d. Teaching methods that are appropriate.
    e. Ways to bring people to take action or choose a course of action.

Criterion VII - A good supervisor uses evaluation to improve every major phase of the county extension program. To this end, the supervisor does such things as:

1. Determines performance standards.
2. Helps agents carry on informal evaluations to determine the effectiveness of extension programs.

3. Makes reports of study findings to others in extension.
4. Helps agents interpret and use research findings about extension.
5. Lets agents know how they are getting along on the job.
6. Uses agent meetings to discuss evaluation techniques that individual agents have found helpful.
7. Studies the findings from extension research and their implications for county extension work.

Criterion VIII - A good supervisor evaluates his own effectiveness. In practice he does such things as:

1. Reviews annually with county extension agents his own supervisory objectives and methods and encourages suggestions for improvement.
2. Studies research dealing with supervision and its application to the improvement of his own job.
3. Develops a self evaluation check sheet for periodic study of supervisory procedures and results.
4. Provides for systematic evaluation of supervisors' meetings with agents.

Criterion IX - A good supervisor demonstrates a desire to be of assistance to the agents personally and professionally. In practice he does such things as:

1. Takes an interest in each extension agent as an individual.
2. Keeps agents informed in advance of policy changes that will affect them.
3. Periodically analyzes with agents ways to achieve greater job satisfactions.
4. Makes criticisms constructive rather than negative.
5. Systematically acquaints extension administrators with county viewpoint, programs, and accomplishments.
6. When job openings occur, reviews each county agent's placement situation in relation to maximum use of his or her capabilities.

Leadership vs. Administration [1]

I deliberately chose the title leadership versus administration to provoke attention. Obviously administration should mean leadership and leaders should be able to administer. This is not always the case. In fact, there seems to be an unfortunate metamorphosis that takes place with leaders when they become administrators. Too many lose their excellent leadership qualities in the performance of their administrative responsibilities. One may ask, and students of administration certainly should ask why does this happen?

First lets make sure we do not condemn all administrators. Certainly good administrators exist whom we recognize as good leaders. We are speaking of the others who are administrators but are not leaders.

[1] Joseph Di Franco - Extensionist, FAO Pamphlet presented in Turrialba, Costa Rica July, 1966

In the author's opinion, one is not a good administrator unless he is also a leader. One who does not lead the group may have the title of administrator but this in itself does not insure that the individual adequately fulfills his role and responsibility.

What is an administrator's responsibility? It is to carry out the process of administration which is to plan, organize, assign duties, direct and control the activities and personnel towards accomplishing the objectives of the organization. Both good and bad administrators would accept this general term of reference - in fact, all administrators usually have this spelled out in their job descriptions. The difference, however, is in the application of the process. Successful administrators put emphasis on the means to obtain the ends and unsuccessful administrators concentrate on the ends.

To clarify, when one assumes the responsibility of administration he is responsible for a group. It is the group then which must work to accomplish certain goals. The process of administration requires that the group be taken into consideration in all activities designed to accomplish the ultimate goal of the group. This takes a special kind of individual who can utilize the resources of the group to carry out the necessary steps of planning, organizing, etc. Unfortunately it seems much easier for some administrators to do the job themselves. This is perhaps the clue as to where the dividing line occurs between successful administration and unsuccessful administration. Success in administration depends upon the ability of the administrator to lead others in the activities necessary to accomplish the objective of the organization.

This kind of leadership is dependent upon the individual's:

1. ability to command respect and loyalty,
2. ability to transfer responsibility,
3. ability to include all levels in policy development,
4. ability to instill confidence,
5. ability to generate enthusiasm,
6. ability to teach,
7. ability to learn,
8. ability to instill team spirit and action,
9. ability to make prompt decisions,
10. ability to assume responsibility,
11. ability to listen,
12. ability to recognize limitations in self and others,
13. ability to judge fairly,
14. ability to be honest, and
15. ability to be objective.

These are necessary attributes of a good administrator. These are evident in those who truly lead. They are not qualities usually found in autocratic administrators.

One other aspect should be touched upon, that is the fact that an administrator is usually employed or appointed when an organization or group is involved. A leader also fits this category. One cannot be a leader alone, he must be a leader of others. Therefore, all the known characteristics and qualities that make an individual become a leader are the same that are needed when an administrator is called for. That is why the "leader" of a group usually is appointed, selected or chosen as formal administrator when group action becomes necessary (organized to perform a task or achieve mutual goals.)

Too often the individual who demonstrates "leadership" in a given role, i.e. athletics, research, skills, art, is chosen to head up a group, club or organization. However, unless he has the other qualities in addition to his skill, he usually is a failure as an administrator. He is not a leader in this case, he is only an "expert" or talented individual. This is not synonymous with leadership and successful administration, although there are individuals who are both talented and leaders.

There is another phenomenon that occurs. Some individuals believe that in acquiring an administrator's title they automatically will acquire leadership qualities. The rank or title justifies their action. These type individuals become successful autocrats but never successful administrators. Sometimes they achieve their objectives, more often they do not.

It not only requires that a person who aspires to be an administrator acquire and learn the attributes of good leadership he must be a unique individual who can evaluate himself in an honest and true light. This periodic self-check must be a part of his routine to insure that he does not drift into what we can term as "administrative habits". This drifting often happens under pressure of the job. Thus periodic checks must be made.

One method or means of determining whether one is successful is for the individual to leave the group (or job) and find that the group continues operating smoothly and efficiently during his absence.

Another criterion that can be used as a guide is the morale of the individuals, that make up the team effort. It goes without saying that low morale indicates dissatisfaction and results in lower effort. If low morale exists a good administrator must seek its cause and rectify the situation.

I put the level of production or achievement as another but lesser yard-stick although high production and achievement is the utlimate goal. Autocratic administration under certain conditions can be productive but usually is not consistent nor will high production continue during the administrator's absence.

Are you a good administrator? Do you possess the attributes of good leadership? Do you check periodically the yardsticks that help you determine your success or failure? Do you work at the job of being a good administrator or do you work at administering? Should you be an administrator? These are pertinent questions that all individuals aspiring to be administrators and those administrators aspiring to be successful should ask and seek honest answers.

Chapter 12.

EXTENSION REPORTS [1]

Whatever the stage of development of an extension program in any given country, some system of reporting by the workers is essential if that program is to operate effectively. For adequate and accurate reports form the major means of communication between the various governmental departments and the local participants upon whose combined support the program depends.

Extension reporting systems, like the extension programs themselves, vary from country to country. Some programs have complete reporting systems already in operation; others have almost none. Considerable diversity in reporting systems is not only expected, however, but desired. No reporting system, regardless of how well it may seem to serve the purpose in the country in which it was developed, can be lifted bodily and set into effective operation in another country. In each country the reporting system must be tailored to the special needs of the existing situation.

Certain general principles of extension reporting, however, may prove of use to extension advisors and others responsible for establishing an adequate reporting system, improving reporting systems already in use, or training extension personnel to prepare adequate, accurate reports.

Values of and Uses for Reports

Some resistance to making reports may initially be expected of those extension workers previously unacquainted with reporting systems - and indeed of all those whose attention is directed to practical and immediate results. A discussion, therefore, of the values and uses of reports and their role in assuring the sought after practical results is an important first step in introducing and developing a reporting system. Some of the more significant values and uses for extension reports are as follows:

Self-Appraisal and Intelligent Planning

The over-all objective of extension programs is to help people to develop and to increase their ability and desire to help themselves. If this objective is to be reached, extension programs must be based on those people where they are and on their current facilities and resources. These conditions, however, will constantly shift. As time passes, people change. If the extension program is having the desired effect, the local situation will change. The people's desire to improve themselves and their surroundings will increase. Their ability to carry on self-help programs will improve. Their physical facilities will increase. Skills and practices that contribute to an improved economic position will be used more widely.

As these changes come about, the agent or field worker will need to revise his program to fit the new situation. If the changes do not come about as fast as it is reasonable to expect, the worker will need to revise his procedure and methods in order to make them more effective.

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[1] This publication was prepared jointly by the International Cooperation Administration and the United States Department of Agriculture. Washington, D.C. July 10, 1958.

The very act of preparing reports require the worker to review his past activities and resulting accomplishments in terms of changes in people and their surroundings. A study of past reports helps the worker to evaluate the effectiveness of his work. A review of these reports may uncover weak and strong points in past operations. With this knowledge the worker can more intelligently plan for future programs.

Supervisor's Appraisal of Workers

Advancement within the ranks is one of the incentives motivating workers to do their best. The future success of a worker advanced to a more responsible position depends often upon how accurately his supervisor has appraised his ability. Among the several sources of information available to the supervisor in his appraisal of a worker's effectiveness are the reports previously prepared by the worker.

Planning the Supervisory Program

Another important function of the supervisor is to help the workers become more skillful and effective in their work. The supervisor must always be alert to ways in which he can help the worker. He must so plan his supervisory program that he can spend the major part of his time with the workers needing most help and only a minimum amount of time with the more successful workers. Because some workers over-report, others under-report, and still others fail to prepare reports giving a clear picture of the work being done and the results obtained, information secured from reports must be supplemented by information secured on trips to the field. Nevertheless, reports furnish much basic information that will help the supervisor in planning where his time is most needed.

Director's Guidance of the Over-All Program and Organization

The director is responsible for guiding the over-all program. He must also direct the field organization and interpret administrative directives, rules, and regulations applying to his particular region. To carry out these directives and comply with these rules and regulations he must prepare and put into effect various plans and instructions.

To fulfill these duties the director must keep up to date on what is happening in his region. When there are only a few field workers, as in the earlier stages of development of extension work, a director might be able to meet with every worker as often as once a month. Thus he could remain acquainted with field activities and developments. But as the work develops and the staff increases, the director is no longer able to make frequent personal contact with each staff member. He must therefore depend upon reports as the most reliable source of information regarding field operations and developments. Thus, to a very large extent, the effectiveness of the director depends on the promptness, accuracy and comprehensiveness of the workers' reports.

Background for New Workers and Supervisors

From time to time workers and supervisors may be transferred to areas where extension work has been carried on by another person. In such cases the new person must become familiar with the local situation. This is necessary if he is to base his program on the people where they are and the facilities they have and know how to use. As background material for making a rapid and accurate assessment of the situation, a complete set of reports left by the former worker or supervisor will prove extremely valuable.

Justifying Public Expenditures and Supporting Budget Requests

In nearly all countries where extension has developed to any appreciable extent, it depends upon public funds for its support. As with any organization depending upon public funds, it has two important obligations: to justify past expenditures and to support requests for budgets with valid evidence of its worth in national development.

High governmental officials and those responsible for appropriations must determine the uses to which public funds will be put. They therefore look to extension administrators to furnish them information justifying expenditures and supporting budget requests. Without adequate reports from the field, administrators would be unable to perform either of these obligations.

Securing Public Support and Interest

For its ultimate success extension needs public support and interest. It needs the support and interest not only of the local people in the areas where the work is being done but of the public in general. Wherever extension is making a creditable achievement, stories of its activities and resultant accomplishments and improvements go a long way in securing such public interest and support.

Extension officials or publicity departments who must present these stories to the public in an interesting fashion, look to reports as the best source of ready information for these stories. The worker, depending as he does on public support and interest, has an obligation to include in his reports facts and information of interest to the public.

Recording Time Trends

When extension work has been carried on for some time in a given area, the resulting changes in both people and situations will usually follow certain definite trends. These trends should be revealed when reports covering a more or less extended period of time are analyzed. Knowledge of such trends is an invaluable guide in planning future programs.

To illustrate: if improved seed has been adopted by a large enough percentage of the farmers, the agent can discontinue demonstrations of the results obtained from improved seed, devoting that time to other needed activities. Another example might be that when the large-scale production of sugar crops and the manufacturing of sugar has been reached, by-products valuable as livestock feed are being wasted in large amounts. Realization of this wastage might point the way to an increased livestock industry or to a campaign for better feeding of the livestock already in the area.

Developing an Effective Reporting System

Just as extension programs need to be geared to the local people and the situation in which they live, extension reporting systems need to be geared to the extension organization and the stage of development in the country involved. This means in turn that those responsible for developing a reporting system in a given country must have a full understanding of its extension organization.

Definitions

A reporting system is the total reporting effort made by the extension staff members at all levels.

A standard reporting system requires that all staff members at each organizational level use identical forms in their reporting. Further, in a standard reporting system all staff members must have the same understanding of the type of information to be recorded in each section of the report.

Need for a Standard Reporting System

Some of the needs for a standard reporting system are revealed in a study of the values and uses for reports. Much of the material contained in the national report of extension work must come from the reports of local agents or field workers. Other information for the national report must come from the reports of supervisors and directors. Therefore, the figures and statements contained in all these reports from the field, which must be consolidated and summarized into figures and statements to tell the national story of extension activities and accomplishments, must be compatible.

If figures and statements within a number of reports to be summarized are not compatible, the resulting figure or statement will not be valid. To illustrate: (1) If the report calls for yields per acre and one worker reports bushels, another kilos, while others report sacks or some other unit, the resulting figure when such dissimilar units are added together would be meaningless. (2) The report might call for the number of demonstrations. If the kinds of demonstrations are not specified, some workers may report only method demonstrations, others only result demonstrations, while still others might report both result and method demonstrations. Such inconsistencies in reporting would also result in a misleading total.

Unless instructions for preparing reports specify what is desired, different workers may interpret many items in any extension report form in more than one way. At the same time, without a standard reporting system, workers in one section or region in the extension program may include a wholly different set of items in their reports from those in another. It is, therefore, as important in a standard reporting system for all reports of the same level to contain the same items as it is for all items in the reports to be fully defined.

Steps in Developing an Effective Standard Reporting System

1. The first step in developing a standard reporting system is to analyze the extension organization and its method of operation.

2. If there is a reporting system already in use, it will need careful study.

   - Do the reports being prepared by each level of the staff contain all the information needed by the reporter in carrying out the functions of his position, in planning future activities, and in informing the public in his area of operation?

   - Do the reports of each level contain the information needed by the staff member or officer of the next higher level?

   - Do the national reports contain sufficient information to justify past expenditures, support requests for appropriations, inform the general public, and to make administrative decisions?

   - Are all items in each report fully defined?

   - Do all persons preparing reports fully understand what they need to report and why this information is needed?

   - Are workers at each level required to report on the same items as are other workers of the same level?

   - Last but not least, could some of the items be deleted from the reports without impairing their effectiveness?

3. What information is needed by the central or national office must be determined.

4. Which provincial or state offices will need to plan their activities and prepare the reports needed by the central national office must also be determined.

5. This same procedure should then be carried out in turn for each lower level of the field staff.

6. How best to obtain needed information should be studied. Can some of it be obtained through conferences, correspondence, field trips, or from other governmental agencies? What information will need to be secured by reports?

7. Report forms and narrative outlines for each level should be prepared.

8. Detailed instructions for the preparation of each report containing definitions and clarifying statements for each item not completely self-explanatory, should be developed.

9. Representatives of administrative offices should explain the reporting system and instructions to field directors and supervisors, planning with them ways and means of getting the system into operation and training the workers to prepare the required reports properly.

NOTE: The steps listed in this section are primarily for countries where extension is organized on a national basis, with a central administration and varying levels of supervision. In countries where the organization is less complete, the process of determining what is needed should start with the highest existing staff level and work down to the lowest. Where the area involved is only a region, the process should start with the highest staff level in the region. But, in addition, information required of that region by provincial or national offices must be included for consideration.

Determing How Frequently Reports Should be Required

A first principle of a good reporting system is that only truly essential reports should be required. Field workers are not as a general rule enthusiastic report writers. Time and thought spent in preparing reports must be taken away from time spent in the field. If workers are required to make unnecessary reports, they will be wasting valuable time.

Where the extension service is new and relatively undeveloped, the worker may need to submit a short-term report to the supervisor every 15 days. The director for his part may be required to make a quarterly report to the administrative officer. When these somewhat frequent reports are available, supervisors and administrators can keep more closely in touch with current operations. At the same time, the field reports, being frequent, can be brief and relatively easy to prepare.

As an organization develops, however, fewer reports will be required. Field operational patterns will become established. Supervisors and directors will become more familiar with the work of the individual agents. The field workers themselves will become more proficient in preparing their reports. At this time, short-term reports should be made to cover a longer period of time and can be somewhat more comprehensive.

The following is a suggested outline of report periods for different staff members of a fairly well developed extension service.

Staff Member	Report Period	To Whom Report is Submitted
Agent	1 month 1 year	Supervisor Supervisor
Supervisor	3 months 1 year	Director Director
Director	1 year	Administrator

In the early stages of development of an extension service, supervisors, rather than field workers, may more profitably prepare the annual reports. In this case, only a brief supplementary statistical report at annual report time may be needed from the field workers.

Setting the time for closing the report year should be considered carefully. Since administrators will need information on accomplishments when they present their budget requests, the report year should perhaps end early enough that a consolidated nation-wide report would precede the preparing of budget requests. On the other hand, reporting might be more effective if the report year closed at the end of a particular season.

Kinds of Report

Definitions

In any reporting system both short-term and long-term reports will usually be required of the extension workers at the lower level. Since much of the supervisor's programming must meet current situations and problems, he will need to have certain reports from the field workers often enough to keep his plans up to date and therefore make his work most effective. Supervisors on the other hand should not need to report to directors as often as workers report to supervisors.

1. Short-term reports designate reports submitted either semi-monthly or monthly. These are primarily operational reports; that is, most of the information which they contain derives from work performed by the field staff and cooperating parties.

2. Long-term reports designate quarterly or annual reports. Long-term reports primarily record accomplishments. They will contain information regarding program accomplishments and progress, pointing out desirable changes which have resulted from the activities of the extension organization.

Forms of Reporting

Experience in many countries has shown that in order to tell the story of extension in a comprehensive, understandable manner both work stories and figure stories are necessary. It has also been found that the most effective way to do this is to divide the reports at each reporting level into sections - the statistical section and the narrative section.

1. In the statistical section of a report the story of extension's activities, accomplishments and progress is told as completely as possible with figures. This section might well be called the quantitative section of the report. It shows such things as the amount of work done, the volume of services rendered, the number of practices adopted.

2. No matter how complete and comprehensive the statistical report, some explanation and additional information will be necessary to tell a story that is both well-rounded and understandable to all concerned.

Content of Reports

The statistical sections of extension reports are more easily read and understood when they are divided into several sub-sections. The following is a suggested series of sub-sections, but they should of course be varied to fit the existing situation. (Some of the suggested sub-divisions should be left out perhaps and some not mentioned should be added.)

Statistical sub-sections

1. Work done by days
2. Extension teaching methods and activities
3. Distribution of time and contacts by subject-matter lines
4. Cooperation with other departments or agencies
5. Accomplishments

Sub-sections (1), (2), (3) and (4) can be used for short-term reports. Sub-section (5) can be the major part of the statistical section of the long-term report. In addition to sub-section (5), condensed summaries of sub-sections (2), (3) and (4) might also be included in the long-term report. Sub-section (1) would not appear in the long-term report.

The work done by days sub-section should show (1) the date, (2) the place where work was done (community, village, barrio, or other term designating the sub-divisions of the reporter's area, or office if the worker's time was spent there), (3) the separate portions of the day spent at each place, (4) the nature of the work done in brief concise statements, such as Organized Village Council; Organized Women's Club; Conducted Spraying Demonstration; Started Cotton Fertilization Result Demonstration; Conducted Clothing Class; Visited (state number) Community Leaders; Arranged for Poultry Educational Meeting; Trained Sanitation Committee; Conducted Drama.

While this sub-section is usually classified as a part of the statistical portion of the report, it is really a combination of statistical and narrative, part being reported in figures, part in descriptive statements.

See a sample form of the work done by days sub-section at the end of this chapter.

The extension teaching methods and activities sub-section should show the way the work is being carried on. The following is a list of activities and methods that might be reported:

1. Method Demonstrations
    - Number conducted
    - Attendance
2. Result demonstrations established

3. General educational meetings
   - Number held
   - Persons attending
4. Planning meetings
   - Number held
   - Persons attending
5. Leader or committee training meetings
   - Number held
   - Persons attending
6. Work meetings
   - Number held
   - Persons attending
7. Social events planned or conducted
   - Number
   - Persons attending
8. All other meetings held or attended
   - Number
   - Attendance
9. Groups organized
   - Planning committees or councils

     Number of members
   - Women's clubs

     Number of members
   - Boys' and girls' clubs

     Number of members
   - Farmers' clubs

     Number of members
   - Social clubs

     Number of members
   - Campaign or work committees

     Number of members

10. Posters, leaflets or bulletins distributed
11. Radio broadcasts prepared
12. Fairs or exhibits
    - Number held
    - Persons attending

The preceding list of methods and activities of course, is only suggested. Those that do not apply to the existing situation should not be used. Others needed in the situation should be added. Possibly several of the suggested items might profitably be consolidated into a single item that would better serve the need.

See a sample form of the extension teaching methods and activities sub-section at the end of this chapter.

The distribution of time and contacts by subject should show the time spent and contacts made by the workers on each major line of work. The following is a suggested list of lines of work:

1. Organization and planning
2. Food crops
3. Fiber crops
4. Forage crops
5. Forestry
6. Livestock for work
7. Livestock for food
8. Dairy
9. Fruits and vegetables
10. Cooperatives
11. Soil and water conservation and management
12. Pest and insect control
13. Farm-to-market roads
14. Improved machinery and equipment
15. Buildings
16. Health and sanitation
17. Home improvement
18. Food and preparation and preservation
19. Clothing
20. Nutrition
21. Social life and recreation
22. Community improvement
23. Inter-community activities

The preceding list should also be revised to fit the situation.

For each line of work the following items should be reported:

- Days devoted by worker
- Attendance at meetings
- Individual visits
- Days devoted by leaders or committee men
- Visits received by worker at headquarters

See a sample form for this sub-section at the end of this chapter.

In the sub-section, cooperation with other departments or agencies, the name of the department or agency should be given together with the project or activity involved and the amount of time spent by representatives of that department or agency.

In the accomplishment sub-section the worker should report selected recommended practices which have been adopted and improvements completed. No attempt should be made in this section to report all the improvements made or all the recommended practices adopted. To do so would require detailed surveys and evaluation studies. Only selected items common to all regions or important to the national development should be included in this sub-section. The following are sample items:

1. Agriculture - Cultivators using improved seed. Hectares or acres planted with improved seed. Cultivators using commercial fertilizers. Hectares or acres of different crops fertilized. Cultivators using improved implements. Manure pits dug. Number of cultivators using pits cited above.

2. Home Economics - Improved stoves built. Women using improved methods of clothing construction. Families receiving improved diets.

3. Animal Production - Improved sires secured. Improved females secured. Farmers using improved feeding.

4. Poultry - Families using improved birds. Number of cocks. Number of hens. Families feeding improved rations. Number of families growing poultry for the first time.

5. Health and sanitation - Houses sprayed for fly and mosquito control. Streets and yards cleaned and drained. Dispensaries established.

6. Home Industries - Number of families making non-agricultural products for sale. Number of families increasing production of non-agricultural products. Number of families using improved methods of producing non-agricultural products.

7. Cooperatives - Marketing cooperatives organized. Number of members. Credit cooperatives organized. Number of members. Purchasing cooperatives organized. Number of members. See a sample form for the accomplishments sub-section at the end of this chapter.

The narrative section of extension reports should be as brief and concise as possible. It should contain only the most important items and the most important details in each item. Minor details, if needed for special purposes can be secured later.

In deciding what to include in the narrative report, we need to consider to whom the report is directed and the uses for which it is intended. As the prior discussion on values and uses of reports has shown, an agent writes his report for his own use, for his supervisor, the director, the administrative officers, governmental officials, and the people. The supervisor writes his report for his own use, for the director, the administrative officers, governmental officials and the public. With the uses in mind that the report must fulfill for each one of these persons or groups, the types of information that the narrative must include can be determined. For example, since the supervisor will want to get information from the workers' reports that will help him to be of most assistance to all the agents, each agent should describe the most significant problems which he has overcome and the methods which he used in their solution. Perhaps more important, he should also state the problems he has not been able to solve. The agent's report also should explain the most pertinent figures in the statistical section, showing how these figures indicate desired changes in people and in communities. For use by the supervisor, director, and others who will inform the public of the progress and accomplishments of extension, the agent should also include brief statements of outstanding achievements as well as a few well chosen success stories of persons who have been helped by extension.

The supervisor in turn, should include in his report both a general statement of the progress of the work in his area and selected achievement and success stories from agents' reports. Important supervisory problems solved and problems not yet solved should also be described.

The following is a suggested outline for agents or field workers' narrative reports. It should, of course, be revised to fit the local situation:

Outline for Agent's Narrative

- Review of activities of report period
- Explanation and clarification of important facts reported in statistical section
- Outstanding achievements and events
- Selected individual success stories
- Outstanding problems met and overcome
- Outstanding problems not yet overcome
- Statement of plans for immediate future

Since persons receiving a report are interested in checking field activities and developments in only a few subject areas, a division of the narrative report by headings indicating the various lines of work facilitate their finding the information they need without reading the whole report. This division can be done in two ways. One method would be to use as main headings, the items in the preceding outline with subject matter sub-titles under each item where they apply. The other method would be to use subject matter listing as main headings for the narrative, with those items in the preceding outline listed as sub-titles for each line of work to which they apply.

A common mistake of persons making reports is to feel required to report something in connection with each item on the statistical report forms or in the narrative outline. On the contrary, all report writers should thoroughly understand that they are to report only on those items applicable to some definite activity carried on or some definite accomplishments achieved during the reporting period. That is to say, if the standard report form calls for certain information on wheat, and wheat is not grown in the particular area for which the report is being made, the worker should not feel that he is expected to report something on wheat. Of if the standard form calls for a report on food preservation and no work has been done on food preservation in the reporting period, the agent should leave that section blank.

Records Needed in Preparing Reports

There is no really easy way to prepare reports. But there are ways and means to make the task as easy as possible. First among these is a good set of records. As a rule, the person who habitually keeps his records up to date is the person most able to prepare accurate, comprehensive reports with the least expenditure of time and effort. A number of records that the worker can keep will help to make reporting easier. Four types of records helpful in preparing reports are listed below:

1. Organization records
2. Project or line of work records
3. Cooperation with other departments or agencies
4. Daily records

These four types will, as a general rule, be found to be the most helpful in the preparation of reports. Under some conditions, not all of these records may be necessary. Under other conditions, still other records may be both necessary and helpful.

Organization records - Two types of organizations especially concern the agent or field worker. One type includes organizations that perform functions of a general nature such as program planning and general program promotion, which are essential to the carrying on of an extension program. Such organizations deal with matters essential to many lines of work. They may have been organized by the agent for the specific purpose of carrying on extension work, or they may be organizations already existing and newly directed to establish and implement the over-all extension program. Typical extension functions performed by such general organizations are program determination, program planning, and leadership in program execution. Organizations of this type are: (1) community or village councils, (2) women's clubs, (3) home economic councils, (4) youth councils, (5) special program committees.

The other type of organization consists of those designed to promote particular projects or lines of work. Typical of such groups would be: (1) a health and sanitation committee, (2) a cotton improvement committee, (3) a consumers' cooperative, (4) a livestock improvement association.

A special file or record book should be set aside for the keeping of records on the general type of organization. Included in such a file or record book would be the following information:

1. Name of organization
2. Headquarters
3. Date of organization
4. Names and addresses of officers
5. Names and addresses of members
6. Places and dates of meetings
7. Minutes of meetings
8. Special or sub-committees
9. Members of special or sub-committees
10. Assignments and activities of committees.

Records of specialized committees or organizations should be kept in the project or lines of work record to which they apply.

Project or lines of work records

One set of records should be kept for each project or line of work that is included in the extension program. The records of committees or organizations whose functions are limited to a specific project or line of work should be kept under that line of work.

Some of the information to be included in project or line of work records are:

1. Names of committees
2. Members of committees
3. Activities of committees
4. Names of volunteer local leaders
5. Activities of local leaders
6. Activities and teaching methods used by agent
    - Meeting and attendance
    - Special events of an educational nature
    - Method demonstration and attendance
    - Result demonstration
        - (i) Date established
        - (ii) Name of demonstrator
        - (iii) Detailed description of demonstration including (a) practices, (b) size, (c) location
        - (iv) Meetings at demonstration and attendance
        - (v) Results
        - (vi) Visits or calls
    - Dramas
    - Other educational activities
7. Accomplishments (Persons or families adopting practices)
8. Individual success stories
9. Other pertinent information

Cooperation with other departments or organizations

A complete record should be kept of all work done by the extension agent in furthering the programs of other departments and agencies dealing with rural development. Likewise a record should be kept of all work done by representatives of cooperating departments and agencies in furthering the extension program.

These records should contain:

1. Name of cooperating department, agency, or organization
2. Name of representative or representatives of such departments, agencies, or organizations
3. Name of project, activity, or line of work
4. Work done by extension worker
5. Work done by representatives of other groups

Daily record

Daily records of work accomplished are very helpful to the extension worker when the time comes to prepare reports. Workers who go about their work for one or two weeks neglecting to post their daily records, almost invariably find that they have forgotten or overlooked many details. The worker who trains himself to jot down daily record information at the time it happens, or at least once each day usually has the most complete record and prepares it with the least effort.

Below is a suggested guide to the type of information to be included in the daily record.

1. Village or community visited
2. Time spent in each
3. Time spent in office or headquarters
4. Nature of work done in each place
5. Persons interviewed or visited
6. Meetings and attendance
7. Any other information that might be needed at a later date.

Report and Record Forms

Standard report forms are an essential part of a good reporting system. In the first place, the person preparing the report will have much less difficulty including the needed information in his statistical report if an adequate form is available. Also the jobs of summarizing the workers' reports to make an area report and the summarizing of area reports to make regional and national reports are greatly simplified by the use of uniform standard forms.

As has been stated earlier, a reporting system must be based on local situation. The same is true of report forms. Report forms which have served excellently in one country may not be suitable at all in another.

When the reports to be made by the workers and the information to be contained in those reports has been determined, suitable forms should be prepared and put into use in the field for a trial period. After the trial period the forms should be carefully studied in order to be improved and better adapted to the situation.

Several sample report forms are shown at the end of this chapter. While none of these may be usable precisely as they are, they can serve as guides in the preparation of forms to fit the local needs. All of the sample forms have been abridged. No attempt has been made to include in them all of the items that may be needed.

As a rule, all of the practices adopted or all of the improvements made would not be included in the accomplishments section of the report. The main purpose of this section is to record the overall results of extension work and its contribution to nation development. The items included should be those that would best serve as evidence of rural improvements resulting from extension work.

If extension work is already well established in a country, the accomplishments section might not be prepared more than once a year. But where extension is in the earlier stages of development, achievement reports prepared quarterly or even monthly might help to further the work.

Record forms

Just as reporting can be made easier by the use of forms, the task of keeping records can be lightened and systematized in the same way. Records are for the purpose of storing information for later use. When it has been determined what information will be needed, forms for the recording of that information should be prepared.

1. Daily record form

Crops are harvested in the field, then transported to the warehouse, where they are stored until they are needed. Information for reports is handled in a somewhat similar manner. The extension worker picks up the information he needs for his reports, then carries it to his files to be stored until he begins to prepare the reports. A suitable conveyance is needed to carry this information from the field to the office. Many people use their memories for this purpose - which is like carrying crops from the field to the storehouse in ones arms. Much is likely to be lost on the way. Like a basket or cart, the daily record form carries our information with the minimum of loss.

One of the most convenient ways to use the daily record form is to bind a number of them together in a field book size which can be carried handily by the agent as he goes about his work. This field book of daily record forms will then serve as a daybook in which all types of information can be entered at the time it is received. At least once each week the information from the daily record and entered into the report.

2. Demonstration record forms

Forms can also be prepared to facilitate the keeping of records of both result and method demonstrations.

Sample forms for keeping records of Result Demonstrations and Method Demonstrations are shown on the following pages. But many other record forms might be used. These may serve as guides in preparing forms to simplify record keeping.

SAMPLE: DAILY RECORD FORM

DATE______________19__

Community or Village	Time Spent	Nature of Work

MEETINGS

Place	Kind of Meeting	Attendance

PERSONAL VISITS OR INTERVIEWS

Place	Person's Name	Subject or line Work

NOTES (OTHER INFORMATION NEEDED)

____

____

____

____

SAMPLE: RESULT DEMONSTRATION RECORD FORM

Line of Work________________________________

Name of Demonstrator__________________________Address__________________

Location____

Practices to be Demonstrated____

Date Established____________________________

If demonstration involves more than one operation, list each operation and date it was performed below.

Operation	Date Performed

Meetings at Demonstration

Date	Attendance	Date	Attendance

Results____

NOTE: One of these forms should be used for each Result Demonstration. These forms should be kept with the project record to which the demonstration applies. Information for this record is to be posted from the daily record form.

SAMPLE: METHOD DEMONSTRATION RECORD FORM

Line of Work ______________________________ Date ____________________

Place ______________________________________ Attendance _____________

Practice Demonstrated ____

____

____

Person Conducting Demonstration ____________________________________

Work Session

Persons Participating ____

Articles Made ____

NOTE: One of these forms should be made out for each method demonstration and kept with the project record to which it applies. The information for this form is to be posted from the daily record form.

SAMPLE: SHORT-TERM REPORT, SECTION I: WORK DONE BY DAYS (TO BE SECURED FROM DAILY RECORD)

Area__________________________Region__________________Reporter's Name_____

Report Period Ending__________19____Date Submitted__________19______

Date	Place	Amount of Time, Hours of Portions of Day	Work Done

NOTE: Provide one space for each day of the short-term report period. It is recommended that this form be used for monthly or semi-monthly reports and not for reports covering a longer period.

SAMPLE: SHORT-TERM REPORT SECTION II, EXTENSION TEACHING METHODS AND ACTIVITIES (TO BE SECURED FROM DAILY RECORD)

Method or Activity	This Period	Previous	Total This Year
1. Method Demonstrations			
a. Number conducted.			
b. Attendance			
2. Result Demonstrations			
a. Number established.			
b. Number completed.			
c. Meetings held at Result Demonstrations.			
d. Attendance.			
3. General Educational Meetings.			
a. No. held			
b. Attendance.			
4. Planning Meetings			
a. No. held.			
b. Attendance.			
5. Leader Training			
a. Meetings held.			
b. Attendance.			
6. Work Meetings			
a. No held.			
b. Attendance.			

NOTE: Include all methods and activities for which a report is desired.

SAMPLE: SHORT-TERM REPORT SECTION III, TIME SPENT AND CONTACTS BY SUBJECT MATTER LINES, (TO BE SECURED FROM DAILY RECORD)

Line of Work	Days Spent by Worker	Days Spent by Leaders or Committeemen	Attendance at Meetings	Visits Made by Worker (Farm or Home)	Calls on Agent at Office
Organization and Planning					
Food Crops					
Livestock for Food					
Dairy					

NOTE: In the "Line of Work" column, all of the lines of work in the national extension program should be listed.

SAMPLE: LONG-TERM REPORT OF ACCOMPLISHMENTS. (INFORMATION FOR THIS REPORT WILL COME FROM THE PROJECT RECORDS)

Improvement or Practice	This Period	Previous	Total
1. Agriculture a. Cultivators using improved seed.			
b. Acres planted with improved seed.			
c. Manure pits dug.			
d. No. of cultivators using above pits.			
2. Home Economics a. Improved stoves constructed.			
b. Women using improved methods of food preparation.			
c. Families using improved methods of clothing construction.			
3. Health and Sanitation a. Houses and yards sprayed to control mosquitoes and other insects.			
b. Streets and yards cleaned and drained.			
c. Women's health centers established.			

Chapter 13.

EXTENSION EVALUATION 1/ AND INVESTIGATION 2/

Extension has been defined as an educational process with the purpose of bringing about desirable changes in people's behavior (knowledge, skill and attitude) which will contribute to better farm and home practices and better family living. The conceptual changes (thinking or feeling) must precede the technical change (action) and can best be brought about by education. Extension evaluation is the process of determining the extent to which these desired behavioral changes have been accomplished in ways of thinking, feeling and acting. Evaluation means to appraise carefully, and it not only helps to determine the effectiveness of a program but also clarifies what is really being done and how it is done. The extension worker, if properly trained, should be able to judge if the program has been adequately planned and successfully accomplished, not only as to number of practices adopted, but also as to their permanence.

These benefits are attained in evaluating an educational program:

- The evaluation process makes it necessary to state clearly the objectives of the program and to plan carefully.

- Program effectiveness - Evaluation of program progress reveals strengths and weaknesses and accordingly helps to improve the program.

- Eye opener to the teacher (extension worker) - Evaluation provides a critical view of the on going program, and makes the extension worker aware of any need for improvement.

- Public relations - Evaluation provides objective evidence and reliable information to be given to the public on progress and justifies financial support.

- Extension personnel - Through program evaluation, extension personnel gain satisfaction by knowing the extent of achievement.

  This encourages increased effort.

Even though assessment of programs is by no means a new concept, it is often not planned as part of a program. There are many reasons or excuses for this, such as lack of trained personnel to supervise evaluation, weak program planning and lack of well specified objectives, reluctance to face the responsibility of undertaking evaluation, fear of revealing weakness to the public as well as lack of time, and pressure of routine activities. But it is perhaps more the lack of understanding of the purposes and methods of evaluation and the role it plays in an educational program that prevents extension workers from using evaluation as an extension tool.

1/ I. Janelid, Home Economics Extension Officer, Food and Agriculture Organization of the United Nations. Rome, Italy.

2/ Fernando del Rio, Extension Education Specialist, Inter-American Institute of Agricultural Sciences, Turrialba, Costa Rica.

Scope of Evaluation

Degrees of evaluation range from casual everyday observations and informal inquiries to systematic and formal investigations. The local extension worker is more concerned with the relatively simple evaluation processes which give him an insight into his work and leaves the more complicated studies to evaluation specialists.

Everyday observation involves planned observation of the daily activities which gives an impression, even if subjective, that can helpfully guide the work. Such information is collected from casual conversation and offhand remarks, farm and home visits, meetings, and individual discussions.

Informal studies may involve review and analysis of information obtained from records, annual reports, checklists, questionnaires, census data and the like. Extension workers should be trained for this type of evaluation which should form a fairly objective basis for judging a program.

Formal studies are more scientifically planned and carried out to provide objective information as a basis for assessment of the achievement of objectives or effectiveness of methods used. They may include extensive interviews, questionnaires, compilation of data by different devices and benefit from collaboration with rural sociologists and statistical institutions.

Certain basic principles underlie effective evaluation:

1. Evaluation of extension work should be well planned and clearly defined in scope as to what phase of a program is to be evaluated.
2. Extension personnel themselves should take part in evaluation. Self-appraisal helps those who carry out a program, and can be usefully combined with appraisal by an outside person.
3. Everyday evaluation should be continuous and integrated with the program development process from its planning stage to the end.
4. Reliable and effective devices should be used, and a representative sample chosen according to means available.
5. Evaluation should be more concerned with the achievement of behavioral changes than with the number of participants, meetings, hours, items prepared, etc.
6. Careful analysis and interpretation of findings should be considered when an evaluation study is being planned.

Decide What Aspects of a Project to Evaluate

Specify what aspects are to be evaluated and limit evaluation according to means and needs.

One or more of the following aspects may be considered for evaluation:

Situation analysis - Evaluation starts with an investigation of the situation before a program is initiated. Consider the persons involved, general situation and related programs. Analysis of the situation provides a realistic assessment of current problems and a bench mark (baseline) from which to judge accomplishments at the end of a program.

Program planning - Evaluation helps to relate a program to actual conditions, and to adjust it to changing needs during its progress. Which groups of people are being reached? Why are some groups not interested in the extension activities? Which community organizations are most effective to work with? How can local leadership be promoted? Which approaches are most useful with different categories of people? What readjustments need to be made?

Program action - What is being accomplished during the course of the program, and what adjustments need to be made?

Teaching methods - Evaluation serves as a check on teaching methods used. Which method(s) is most effective in a certain situation? Are the methods appropriate and suitable?

Results - Evaluation determines the extent to which the objectives have been reached. How much of the planned program has been accomplished and how long has it taken? Was the information collected in the beginning sufficient and did it serve as a useful bench mark from which to judge the result? Has the desired change in people that was set out in the program been attained?

Extension organization - Evaluation helps to appraise the effectiveness of organization and administration of extension services.

Factors to Consider in Extension Evaluation

There are certain factors involved in evaluation which must be duly considered when planning evaluation of a program.

Persons involved in evaluation:

Evaluation project leader - Evaluation should not be undertaken unless someone is trained in the procedure and can guide the process throughout.

Extension personnel - Local extension personnel should be trained in informal evaluation, how to look for evidence of progress or failure, and for reasons why a program is going well or not.

Outside resources - Collaborate with sociologists, statisticians, and other experts on formal studies. Avoid outside evaluation in which personnel themselves are not involved.

Local people - Inform local people about activities, such as interviews that may involve them, and enlist their cooperation.

Before an investigation is made find out what other studies can give needed information. Census data, reports and yearbooks are often useful resources.

The time factor - Some technical changes require social changes and are a gradual development. Others can be accomplished only at certain seasons. Desired changes of behaviour may not have occured when the program is finished. It is necessary to give a reasonable time for the accomplishment.

Choice of devices - The device chosen should fit the project to be evaluated. The devices most commonly used are interview-questionnaires, mail-questionnaires, and checklists.

Financial implications - Before a study is started determine the financial requirements to cover the scope of the project, obtaining the required information, tabulation and analysis of data.

Criteria for Evaluating Extension Programs

Evaluation may be applied to each step used in program development. The major stages in the extension program cycle and their relationship to evaluation are as follows:

Program Determination

Situation analysis (for setting a baseline) - Study of conditions involves collection of the information (fact finding), including social, economic and cultural factors, which is needed for program planning, followed by careful analysis according to certain standards in relation to the situation. The extension worker should ask - Are the facts adequate and accurate? For example, if a demonstration is planned on the development of a vegetable garden, one must know the kind of soil available, which vegetables are suitable for planting, etc., before a program is suggested. It is of no use to collect a number of facts if the data cannot be carefully analyzed. Fact finding, therefore, needs to be planned and limited according to available resources for analysis.

When analyzing the actual situation, it is also necessary to find out what other programs are being carried out or planned in order to ensure that the extension program fits in with them and does not overlap.

Identification of problems - On the basis of information collected, identify and analyze the problems. For example, which problems are of concern to people in the region and therefore come under the responsibility of the extension workers? Are the people (local leaders) involved in setting the objectives and drawing up plans?

Determination of objectives - Look carefully at the proposed objectives to make sure they are stated and defined in a way that is measurable. Are the objectives based on the needs of the people? Do the objectives clearly define what changes are to be accomplished in relation to people involved? Are the objectives specific enough to serve as a basis for carrying out a specific program? Are the objectives within the limits of available resources and possible to achieve within a set time limit? *

Program plan - During the program planning stage, evaluation is used to determine how the short-term programs fit into the long-term programs, whether the teaching methods are well chosen, and whether the extension staff are well prepared for their teaching duties, or if outside persons need to be called upon. Are the local leaders involved in the program?

Progress Appraisal

During execution of the program, the extension worker should constantly consider whether the program is going in the right direction, and what measures need to be taken to adjust it.

- Is the program reaching the objectives? If not, are the objectives not clearly defined, were they too comprehensive for the means available, or has the situation changed so that it is necessary to adjust the original objectives? Were the objectives decided upon in collaboration with the people? Does the plan identify jobs to be done, persons responsible, teaching methods to be used, dates for events and activities? Is the plan being followed?

- Are the methods that are being used effective and particularly suited to the people, their education and interest?

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* See "Defining Objectives in Operational Terms", p. 263.

- Does the content of the program meet the needs of the people? If not, is the program flexible so that it can be adjusted?

- Is the time limit set attainable?

- Are the efforts of the extension worker coordinated with those of other agencies?

Analysis of Accomplishments

- Has the program reached the main objectives?

- What kind of changes have taken place, if any:

  i) In physical situation; for example increased production, improvements of conditions or practices;

  ii) In people, i.e. changes in behaviour, knowledge, attitudes, skills; and by what means have these changes been brought about?

- If certain changes in practices, attitudes and skills have taken place are the changes of a temporary, occasional or more permanent nature?

- Are desired changes the result of the program or of other factors?

- Is the cost of bringing about desired changes reasonable?

- Was the change attained within the time limit set in the objective?

- What improvements can be considered in planning future program?

Even long personal experience used as basis for planning a program can be misleading. It is more satisfactory to use careful observations and a more scientific method of appraising progress.

Planning and Conducting an Evaluation Study

These steps are essential in planning an evaluation study: (1) select a problem demanding investigation; (2) clearly formulate what is to be measured; (3) determine the kind of information needed; (4) decide how to collect the information; and (5) plan how the information is to be used.

The following points will serve as guidelines when planning and conducting evaluation of an educational program.

1. Determine what personnel and financial resources are available and needed for making an investigation -

   - what cooperation is needed from outside resources as to personnel and money?

   - what time is required for carrying out a study?

2. Select and define a part of a program to study

   - what objectives or content of the extension program are to be evaluated?

   - which phase of this program will be evaluated, i.e. program action, teaching methods, results, etc.

- will an evaluation of a certain program or aspect of a program be useful for the future?
- will it be necessary to collect data for the evaluation or is some information already available from other sources?

3. Define and clarify the objectives of the study
   - What evidence is needed to determine that the educational program is reaching its goals in terms of (a) number of accomplishments, or (b) changed behaviour of the people? Which are the most important indicators of changed behaviour?
4. Decide on how to collect information and what devices are needed
   - what kinds of devices are to be used – questionnaires, observation forms, etc.?
   - if a questionnaire is to be used, what questions should be asked and how should they be phrased?
   - set up record forms and prepare instructions for using them,
   - pre-test devices and revise if necessary.
5. Plan tabulation
   - Type of tabulation methods and tables needed to discover relationships
   - Persons and equipment needed for the tabulation.
6. Determine samples
   - Define population to be sampled.
   - Determine what sample is needed and feasible.
   - Prepare instructions for sampling.
7. Prepare for the collection of information.
   - What persons are available to collect information?
   - Select interviewers or collectors of information.
   - Determine what training they need in interviewing, recording, etc.?
   - Conduct training.
8. Collect information in the field
   - Provide necessary supervision.
9. Edit and tabulate data collected.
10. Interpret facts and prepare a report
    - What are the important findings of the study?
    - Do different reports need to be written, e.g. for professional and for lay people?

11. Plan for use of the findings

    - What implications might the findings have for future work?

Even the simplest study such as observation of a demonstration needs to be carefully planned if the evidence collected is to be significant. A first evaluation study should be on a small scale and well defined so that the evaluator does not find himself incapable of carrying it out. However, everyone learns by trial and error.

Sampling, Collection of Data, Tabulation and Analysis of Results

If a program to be evaluated involves only a limited number of people or items (population), they can all be included in the investigation, but if the population is large it is necessary to decide upon a sample or a part of the total number. Population is the group of items from which a sample is drawn. The population must be defined, and it should be clarified whether it refers to people, crops, animals, etc. To draw a sample means to select a small number of items from the total population included in a program. The size of a sample chosen for an investigation should be representative of the total population, but not larger than time and money allow. A sample should not be altered once it has been chosen. If all people or items are to have an equal chance of inclusion in the sample, it is called a "random sample." The random sample may be of an area (area sampling) or of a group of individuals.

The collection of facts can be rather time-consuming, but it is facilitated by careful preparation and supervision.

Tabulation means the process by which the collected information is organized and facts are grouped. Plan the tabulation to provide totals or summary of each item of information gathered and to establish relationships among the items which are relevant to the study. Tabulation may be done either by hand or by machine according to facilities available.

Interpretation of the tabulated data requires a specially trained person who knows the subject and can make an objective and realistic report of the findings.

Some methods of collecting information - the choice of methods will depend upon several factors: (1) the scope and purpose of the study; (2) the number and characteristics of respondents from which the data will be collected; and (3) the resources available in terms of person(s) who will collect the data, level of training and conditions under which he will work, time available for the study, place where the data will be collected, funds budgeted for this purpose, and the practicability of various methods in a particular situation.

The Methods used Generally Include the Following Personal Observation - Home economics and agricultural extension advisors have many opportunities to make personal observations through seeing and hearing. Observations must be systematically planned, recorded and have a purpose. The record should show who was observed, what was observed, how many times an activity took place, where, and for what purpose.

Some advantages of personal observations are that they provide an opportunity for observing many details and for studying personal reactions, practices and conditions. Observations may be carried on as regular work is done without very much extra time and effort. However, there are disadvantages in that the observer makes subjective judgements in terms of what he thinks is important, and he may have difficulty in separating facts from subjective interpretation. If many observations need to be made which are not routine work, it can become rather costly. Observations may not be representative of the population, and if information is needed on many items this method of collecting is impractical.

Checklists - Are often used in order to enable people to make one or more choices from a list of statements regarding a problem or an idea. Usually a statement of the problem is made followed by a list of several possible answers from which a choice may be made.

The advantages of checklists are that they are easy to answer, tabulation is easy, they serve as reminders on items which the respondent may not think of, and respondents are more likely to check an interest than to state an interest in an open ended (or free response) question. Some disadvantages are that they provide for answers which the person wording them considers important, but they may omit important items from the respondent's own thinking, also the order of arrangement of items in a checklist may influence replies.

Rating scales - In rating scales informants are asked to choose, among various degrees of opinion, a feeling or interest about a problem or idea. Descriptive words such as "good", "fair", "poor", and numerical ratings should be defined in terms of characteristics to be measured. Attitudes, opinions and degrees of interest in a subject are some types of behaviour changes that can be checked by the use of rating scales. The advantages are that they are easy to tabulate and provide an opportunity for people to state a degree of feeling or opinion which is not provided for in "yes or no" questions. On the other hand it is difficult to choose appropriate words for describing values as people's interpretations of words may be different, also people often choose the middle value rather than the extremes of "very good" and "excellent" or "poor" and "of no value."

Mail questionnaires - have the advantage of being a reasonably inexpensive method of collecting information and more people can usually be reached by mail than by personal contact; answers are not influenced by an interviewer if no signature is required, and the person answering the questions can take more time to think through questions and possible replies. However, questionnaires are usually more limited in value than personal interviews. Questions may not be understood as there is no opportunity to explain them, returns are fewer, and follow-up is necessary in order to obtain replies from all to whom questionnaires are sent. (Obviously, mail questionnaires are impractical where respondents are illiterate or where mail service is unreliable.)

Case studies - There are studies of a limited number of problems or situations which are valuable for providing concrete information on problems or solutions, and on sequences of events leading to problem solution. They are useful in testing approaches to a specific type of problem. However, they do not provide information for general conclusions and require a great deal of time for observing, recording facts and preparing reports. Relatively few cases can be observed and reported.

Personal interviews - may be carried out in groups or individually. A study can be rendered useless or very valuable according to the way in which the interviewer collects the data.

Both group and individual methods of interviewing have their merits and limitations. The individual interview allows the interviewer to explain the questions and to keep the interest of the respondent for a considerable period of time. Reasons for resistance may be discovered and overcome. The personal contact offers the interviewer opportunities to establish friendly relations, observe personal reactions, and to secure fairly complete answers. However, it is rather expensive to locate and contact individuals, and an untrained interviewer may be apt to bias replies by suggesting answers.

Group interviews - This means bringing people together in a group and asking them to fill in individual questionnaires in writing. In this procedure the person collecting the data explains the questionnaire or record form to the entire group and gives an opportunity for questions to be asked and for clarification of the record form. Each individual member of the group then fills in the form. The interviewer is present to provide further help to understanding the form and to encourage completion of the record. The same explanations regarding the meaning of questions will be received by all group members.

There are some limitations to the group interview - respondents may feel less free to ask questions in the presence of others. There may be a problem of people communicating with each other and being influenced accordingly. There is little or no opportunity for individual probing to get more complete replies if the record form includes free response questions.

Extension personnel must have training in the use of the chosen method(s). This is particularly true in regard to the interview techniques.

The interviewer bears an important part of the responsibility for the successful completion of an evaluation. He should: (1) understand the purpose of the study being made and for what reasons information is being collected; (2) be thoroughly familiar with the questionnaires or record form; (3) be able to locate a prospective respondent, make the contact and secure his cooperation; (4) get the facts and record them honestly, completely and as objectively as possible; (5) be considerate and honest with the respondent; (6) follow questions carefully and not suggest answers; (7) follow sampling instructions completely and report any unusual situations; and (8) edit schedules carefully.

Once an interviewer is assigned certain prospective respondents, it then becomes his duty to locate the persons and secure the information. A respondent is not given up because he may not be at home, or is absent for a long period of time, ill, or unavailable for other reasons. Several calls may be necessary to locate a person who is away from home for some reason.

Interviewing is best done by people who are interested in the work and who can maintain an objective approach. If possible, the local extension worker should be considered for such assignments. The interviewer should be allowed sufficient time in which to complete a job when once started.

Whatever method is chosen, it should be well understood by those who are to use it, and persons involved in the collection of information should be adequately trained for this purpose.

Examples of Evaluation Studies

Evaluation of the result of a program in terms of physical evidence

A number of agricultural projects and reforms have been undertaken in Italy with the purpose to improve agricultural productivity and transform an economy of subsistance farming into a market economy. In a pilot project undertaken in 1954 by the Italian Shell Company [1] it was thought that the system of agrarian land reforms can only stimulate agricultural productivity if it goes hand in hand with measures for increasing the technical knowledge and the initiative of the farmers themselves. The project was undertaken in a typical peasant community of Northern Italy, Borgo a Mozzano, with the purpose of demonstrating how a rural area can be improved through technical assistance by the active participation of the people themselves. The objectives of the project were (1) to transform small farmers into competent managers of their farms; and (2) to create a channel of information between farmers and research institutions outside the community.

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[1] Borgo a Mozzano, Technical Assistance in a Rural Community in Italy by L.E. Virone; Geographical Publications Ltd., The World Land Use Survey, Occasional Papers, No. 4

In order to assess the project later a bench mark was set by making a detailed survey of physical, economic and demographic characteristics.

The technical assistance project started with the appointment of an agronomist who collected information in regard to occupation of the active population, use and ownership of the land, number and size of holdings, livestock, as a basis for further activities. The agronomist lived in the community in order to get acquainted with the people and to gain their confidence, obtain necessary information and to start simple improvements.

Based on the investigations, the problems of the community were divided into two categories: (1) simple problems, i.e. those that could be tackled by the farmer himself and give immediate results; and (2) complex problems, those that needed more time and involved outside resources, such as cooperative undertakings.

The agronomist helped the farmer to face the problems and work on solutions and when necessary to seek help from outside sources. Two years later a home economist was employed to work with the rural women along the same lines especially with practical aspects such as poultry management where tangible results were more easily obtained.

Evaluation of the results of a project like that at Borgo a Mozzano, could easily be done in respect to physical evidence by comparing the results with the initial study. The main purpose of the project was to show that with the help of technical assistance agricultural productivity could be increased. When assessing the results it was clearly evident that the income of the farmers had increased considerably, which is of extreme importance if any betterment of the living conditions are to be obtained in a community. Without physical evidence the farmers tend to show great resistance toward other changes.

The objectives of the project in this respect, i.e. to improve quantity and quality of the agricultural produce, to reduce production and distribution costs, and to introduce new productive activities, were well achieved and shown in figures in the report. The financial result shown after eight years of technical assistance was most encouraging as to increased income, improved products and farm and home practices adopted.

No planned evaluation was undertaken in respect to changes in the behaviour of the people, such as changes in the skills and attitudes. It is clear however that following the shift in agricultural practices the farm families have made a number of changes in their own behaviour patterns as well as in their attitude toward accepting the innovations that have been introduced. A special study would be needed to show exactly what changes have taken place and the permanence of such changes.

Evaluation in Terms of Changed Behaviour of the People, i.e. the Adoption of New Farm Practices

The study 1/ was undertaken in a rural community of Iowa, (USA) as to the sources of information and the time for adoption of two new farm practices, i.e. the use of a weed spray and an antibiotic feed supplement for hogs. The study was undertaken in 1955 with the purpose of evaluating the process of adopting new farm practices: (1) the stages in the adoption process—awareness, interest, trial and adoption; (2) sources of information used by the farmers at different stages; (3) the rate of adoption over time; (4) the interrelationships between time of awareness, trial and adoption and the time lag between these stages; and (5) personal, social and economic characteristics of the adopter categories.

1/ George M. Beal and Everett M. Rogers - The adoption of the Farm Practices in a Central Iowa Community, Special Report No. 26. Ames, Iowa June 1960.

The findings of the study revealed that certain sources of information are more important at some stages than at others.

Mass media is important at the awareness and interest stages, informal sources such as friends and neighbours are particularly important at the application trial and adoption stage, with government agencies including the extension service second in importance. Commercial sources take the third and fourth places in importance. A most interesting result of the study was the importance of informal sources, such as friends and neighbors, in the process of diffusing new technological practices.

Summary

Evaluation is a fundamental part of extension programs. Every extension activity involves a conscious or unconsious appraisal of progress and effectiveness. Simple but objective and well organized extension studies, conducted by extension workers in cooperation with rural leaders help make the extension program realistic in terms of people's needs, justify the investment of public funds and are educational to those who participate.

Steps in making an evaluation study include: 1/

1. Decide upon the need and use of an evaluation study.
2. Meet with the persons who will be involved to plan the evaluation.
3. Decide upon the information you want from the evaluation.
4. Prepare the forms on which the information will be recorded and pre-test the record forms.
5. Decide upon the population from whom you want the information and the sampling procedure.
6. Determine who will collect the information.
7. Train the interviewers to collect the information.
8. Make the interviews.
9. Edit the record forms each night.
10. Analyze the records and organize the data to answer the major questions of the study.
11. Prepare a report organized around the need for the study and the major questions.
12. Act on the findings of the study.

1/ Fred P. Frutchey - How to Make an Evaluation Study - Federal Extension Service, U.S. Department of Agriculture, Washington, D.C. USA.

Defining Objectives in Operational Terms [1]

All too often, objectives are drafted to tell a good deal about a project or program, but they do not specify the intended outcomes in terms of the participants. They fail to include criteria for determining when the intended outcomes have been achieved. When objectives are clearly defined, participants can evaluate their own progress at any stage of the project or program and can adjust their efforts around relevant activities for accomplishing those objectives.

Many words or phrases commonly used in stating objectives are open to a wide range of interpretation. When we use such words, there are endless opportunities for misinterpretation. Examples that come quickly to mind include - to know, to understand, to appreciate, to grasp the significance of, to enjoy, to believe.

Other words we could use are open to fewer interpretations and, as a result, will contribute to more precisely stated indicators of behavior. Examples of this category include - to write, to identify, to differentiate, to solve, to construct, to name, to compare.

It is all right to use such words as "understand" and "appreciate" in stating objectives only if you indicate what the participants in the project or program will be doing when demonstrating their understanding and appreciation. The most important characteristic of a useful objective is that it identifies the kind of performance to be accepted as evidence that participants have achieved.

Invariably, when objectives are stated in meaningful and useful terms rather than general terms there will be many objectives for the project or program. The more specific the level at which you develop your objectives, the more accurately you can determine the intermediate and ultimate successes of the project or program.

Objectives can range from the broad and general - reduce mortality - to the very specific - read a health leaflet on initial symptoms of heart malignancies. In a total project or program there is an unlimited universe of objectives and sub-objectives for the many steps or actions. In a well designed project or program these steps and actions will blend into a continuous series of events which, for purposes of evaluation, must be systematized into some hierarchy of objectives and sub-objectives. Each objective will depend for successful accomplishment on success of the previous objective and, in turn, will exert a preconditioning force on the next and subsequent objectives.

The chain of objectives can be subdivided into immediate, intermediate, and ultimate objectives. The first refer to the results of a specific act with which you are concerned momentarily, such as the formation of an obesity club. Intermediate objectives deal with accomplishment of specific acts, such as concrete indicators of weight reduction of club members. The ultimate objective is stated in measurable terms relevant to the effect achievement of intermediate objectives has on the health of members in such terms as reduction in the incidence of heart disease.

A well written project or program objective should answer three questions: (1) What will the people who have been involved or will be involved be doing or be expected to do? (2) Under what conditions will they be doing it or be able to do it? (3) To what extent are they doing it or are they able or willing to do it? Stated in a single sentence, a well written objective specifies under what conditions and to what extent it is desired that a certain participant performance will take place.

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Federal Extension Service, U.S. Department of Agriculture, Washington, D.C.

Let us consider first the term "performance" which means doing. A participant who performs something does something. Here are two statements. One is expressed in terms of participant performance. (1) Participants will acquire a good understanding of the stages in the social change process. (2) Participants will be able to name and describe each of the stages of the social change process model.

The second statement tells what participants will be able to do. They will be able to name and describe the stages of the social change process. The first statement states that the participants will end up with a good understanding of the process. What this really means is difficult to determine. We cannot tell what it is the participants are supposed to be able to do as evidence of their new understanding.

Now let us consider "conditions," the conditions under which the performance or doing is to take place. Here is our earlier statement of the objective concerning social change: "Participants will be able to name and describe each of the stages of the social change process model." This statement does not set forth the conditions under which the performance is to take place. From this statement we cannot tell whether participants must be able to name the stages from memory, in sequence, or in random order. We do not know whether focus of the description of the stages is to be on the action that takes place or if it is some other condition that is expected for each. A more definitive statement of our objective might be: "Participants will be able to name in sequential order each of the stages of the social change process model, and to describe the action that takes place at each stage."

The next consideration in stating objectives is the matter of extent and level of performance. A well written objective will establish an acceptable minimum standard of achievement. How about this objective? "Participants will be able to name in sequential order the stages of the social change process model, describe the action that takes place in each, and apply the concept of the change model in a current community action project." According to this objective, the participant is expected to take part in and apply or make use of the concept in a community action or change project. This establishes a minimum standard of achievement. The participant is expected to use or apply the model in at least one ongoing community project.

Finally, a well written objective will suggest how its accomplishment can be evaluated. Our objective, as stated above, makes plain how its accomplishment oan be determined. In what community project did the participant take part; what uses were made of the social change process model?

If project and program leaders would be this explicit in writing objectives, they would do much to eliminate one major cause of failure - traditional among those who must carry out projects and programs - that of fuzziness in statements of what constitutes project or program success.

Concepts of Evaluation [1]

Evaluation can be defined as the process of determining the value or amount of success in achieving a predetermined objective. This includes the following steps: formulation of the objectives, identification of proper criteria to use in measuring success and in the determination and explanation of the degree of success. The key conceptual elements in evaluation are "the value or amount of success" and "predetermined objective," while the significant operational terms are "objective," "criteria," and "determination and explanation of the degree of success." Thus inherent in evaluation is the process of assigning value to some objective and then determining the degree of success in attaining this valued objective.

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Evaluation is sometimes defined this way - The measurement of desirable and undesirable consequences of an action that has been taken in order to forward some goal that is valued. Value may be defined as any aspect of a situation, event, or object that is invested with a preferential interest of being "good," "bad," "desirable," "undesirable," or the like. Values are the principles by which priorities are established.

Evaluation should as far as possible be a process which satisfies scientific criteria such as -objective, systematic, and comprehensive. It should be distinguished from all forms of assessment which take the form of one or more persons' judgment of the success or failure of a project, no matter how sensible and wise that judgement appears to be.

Evaluation can be visualized as a circular process, stemming from and returning to the formation of values. Evaluation always starts with some value - for example, it is good to follow management principles in farming; then a goal is formulated from this value. The selection of goals is usually preceded by or concurrent with "value formation." An example of "goal setting" would be the statement that more commercial farmers should have a greater net return on their farming operation. As a measure of this goal we might find out how many farmers have what margins of profit or net returns on their farming operations. In identifying the current measure of this goal the indicators to use in determining the attainment of the goal are decided. Next, a goal-directed activity or program is planned. In this case it is probably decided to have an in-depth management school to bring about understanding and adoption of management principles, partial budgeting, etc. to increase net profits. Now the goal-directed activity is put into operation - we conduct the in-depth training. Following this we want to find out the effect of the goal-activity or in-depth training - is it contributing to changes in farming operations that will lead to increased net returns. Finally we return to value formation and a resetting of goals or objectives.

Evaluation Process

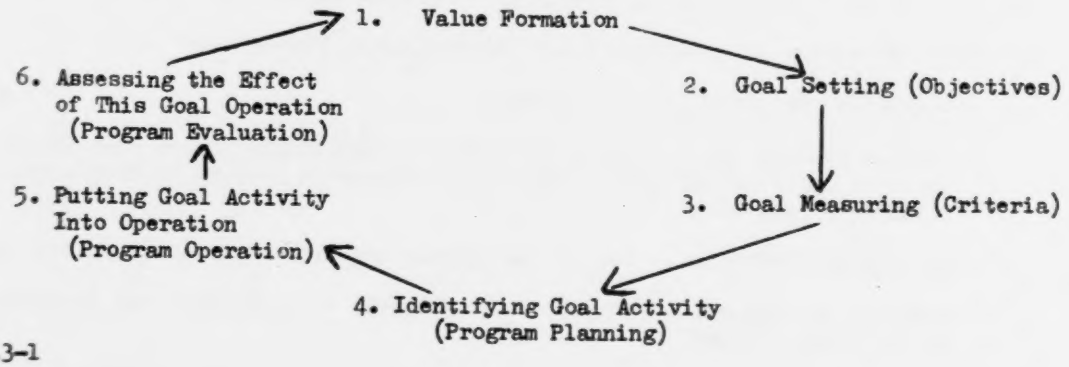
1. Value Formation
2. Goal Setting (Objectives)
3. Goal Measuring (Criteria)
4. Identifying Goal Activity (Program Planning)
5. Putting Goal Activity Into Operation (Program Operation)
6. Assessing the Effect of This Goal Operation (Program Evaluation)

Figure 13-1

The above description and circular process of evaluation points up the close interrelationship between evaluation program planning and program action. Values play a large role in determining the objectives of public educational and service programs and any evaluation of the desirable and undesirable consequences of such programs must take social values into account.

A great deal of confusion and debate exists in regard to evaluation because of the failure to recognize that scientific adequacy is a matter of degree. Decisions about the rigorousness of evaluation must usually be a compromise between scientific requirements and administrative needs and resources. A program or activity may be evaluated on the basis of one or more levels or types of measurement based on different value systems. At the first level, we have the evaluation which a recipient group places on an activity according to its own personal objectives and value system. This represents the individual or group's estimate of the success or failure of a program in which he is taking part.

At the second level, the evaluation could be the appraised worth of an activity as given by a group of "experts" or informed appraisers, usually on the basis of reasonable examination and comparison with prior determined standards or criteria. At the third level, we come to the scientific measurement of effectiveness made in terms of acceptable standardized procedures. This level would adhere to the rules of scientific methodology and utilize instruments of determined reliability and validity.

Investigation in Extension [1]

Extension work is of a dynamic nature. Changes in all phases of extension work affecting conditions and ways of life of people in their local communities are occurring every day. This changing situation deserves full comprehension and understanding as well as thorough knowledge about how to adapt the changes to the local situations. New methods of approaching the important problems arising from those changes need to be found, studied and used. An organization such as the Extension Service, needs to be fully equipped with the knowledge of the scientific process applicable to the study of the nature of such changes as well as the extent to which these are affecting the extension educational process.

There are several important areas in the extension field of work that require frequent study and evaluation on the part of the extension worker himself. Basic information such as the following concerning his community of work and its people is very essential.

1. History of his area of work
2. The economic situation
3. The resources available and their use
4. The social evolution of the community - cultural background
5. Basic knowledge of Rural Sociology, Anthropology, Psychology:
    - understand people and their behaviour
    - factors responsible for the acceleration or inhibition in the adoption of improved practices and the production of favorable changes in knowledge, skills, and attitudes
    - methods and means to be used to accelerate the production of favorable changes
    - means of communication to use most effectively to accelerate the production of favorable changes
6. Evaluation techniques - how and when to evaluate to find out if objectives are being accomplished
7. The proper kind of language and communication techniques to use in the conduct of the extension teaching.

There should be some kind of specialized personnel in an extension organization capable and fully equipped with the scientific knowledge of the techniques of the investigation process applicable to the study of the social sciences, with the responsibility of training all extension personnel on how to conduct periodic studies and investigations that will give the necessary light as to the new methods and new approaches to be used to help people in the solution of their daily problems. This specialized personnel should also have the responsibility for conducting studies and investigations in some areas of a more complex nature that might warrant special skills.

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[1] Fernando del Rio, Extension Education Specialist, Inter-American Institute of Agricultural Sciences. Turrialba, Costa Rica.

Before starting his teaching job with satisfactory results, the extension worker has to know well the people he is working with, their wants and needs, in order that he can make use of the proper ways and means of approach. Different situations require the use of different methods. Under certain conditions the demonstration would be the most effective method to be used in bringing out favorable changes in people. In several other instances the personal contact method, although expensive and time consuming, would probably be the most effective method with certain kinds and levels of people. Many times an extension service cannot afford to depend on this expensive method of individual approach. Group approach would be then the most advisable way of conducting the extension work from the economic and time element points of view. Thus, there is a need of studying and investigating what combination of methods would bring the best results in the teaching job under different situations and with different kinds of people.

No matter how well technically equipped an extension worker is, he will not be able to achieve the degree of success desired in terms of improving the well-being of his people, if he has not given of his time and effort to investigate and learn about his community of work and the people. The study of his community of work and his people will not only provide him with the knowledge and understanding so much necessary for his success, but will also give him a feeling of confidence and faith in what he is doing that contributes so much to his personal satisfaction and to the degree of efficiency with which he carries on his work.

The continued effectiveness of an educational organization such as the Extension Service will depend on:

1. Its program of work and the process through which it is examined periodically in an objective and scientific way.

2. The willingness and disposition of responsible persons in the organization to effect the changes brought out from that examination process.

3. The quality of its personnel and the scientific approach that this personnel is able and willing to give to the different program activities.

This process shall necessarily require much thinking and planning and concerted efforts from various persons in the organization.

To ensure the effectiveness of the organization there needs to exist close relationship between the resources and objectives and the complexity of the changes that take place. Several steps have been taken to analyze the scope of activities of extension work. Efforts have been made by a number of committees and outstanding leaders to identify the most important areas with emphasis to show the value that a scientific examination of this kind would have in helping people to improve their general living conditions. However, the truth is that the investigation work done in extension concerning the development of the different program activities has been very limited. Much remains to be done to:

1. Identify the process through which programs in extension are developed.

2. Identify areas that warrant research.

3. Determine the proper kind of research that would provide the kind of evidence necessary to strengthen and improve the extension program.

The primary responsibility of extension work is to develop an educational program that would bring desirable changes in the people. The success of this effort will depend on the quality of the program and of the personnel involved in its development. The concept of developing the program includes formulating, implementing and evaluating the program. The process is the framework within which all activities and efforts in extension should be organized in close relationship with the obejctives of the organization. In line with this thinking the process may be divided into the following eight major phases:

1. Formulation of the basis and framework for the extension program.
2. Adapting this framework to the existing situation.
3. Organizing the resources necessary for the program planning function.
4. Planning the program on basis of studies conducted.
5. Writing the program statement.
6. Developing the plan of work.
7. Implementing the plan of work.
8. Evaluating the program activities and accomplishments.

Within each one of these phases there exists a number of problems involved in the program process that warrant study and investigation in line with the philosophy, objectives, policies and purpose of the organization. This program process is of a dynamic nature subject to continued changes and adjustments. Thorough study and investigation of these and other relevant problems will need to be conducted at different occasions to obtain objective information that can be used as a basis for strengthening and improving the program process.

In conclusion, the fundamental purpose and objective of extension work is to develop an educational program aimed at bringing about desirable changes in knowledge, skills and attitudes of people. The degree of success obtained will be determined by the quality of the program and of the personnel and resources involved in its development and implementation. The major challenge which extension workers have been confronting is that of the proper identification of the most effective and efficient methods to be used in the program process. Up to now, this identification process has been limited to a few observations and experiences based on very little study, investigation and analysis of the various phases involved in extension work. There is need for developing a systematic plan for investigation work on the extension program process. This will require giving attention to the educational objectives of the organization besides a well defined plan for the training of the extension staff and the proper use and coordination of all necessary resources. It is very necessary that major areas and problems in the program process be properly identified for the purpose of a thorough study and investigation process.

Chapter 14.

PERSONNEL TRAINING AND STAFF DEVELOPMENT

"Economic and social growth among village people - in any nation depends on the ability to build an adequate staff of properly trained professional people to manage the rural development enterprise." 1/ Shortage of adequately trained personnel limits the effectiveness of extension services in many countries. This is true at all levels: field extension workers, supervisors, subject matter specialists and regional and national administrators.

Other rural development institutions and services face the same problem. Their personnel require many of the same basic qualification as extension workers. Thus extension services must compete for personnel trained in agriculture and home economics.

The nature of extension education, like any profession, calls for special knowledge, skills, understanding and attitudes. Knowledge of technical subject matter in agriculture and home economics; practical skill in applying technology in farming and living, skill in teaching farmers and villagers; an understanding of the human relationships in society in which teaching is carried on, of the people, their customs, values and attitudes toward change; and a belief in the ability of rural people to develop and carry out programs for their own benefit.

All extension workers require special knowledge or competence in a number of broad areas. While each employee has special training needs according to his own job requirements, knowledge and understanding is needed by all in the following areas:

Technical subject matter in agriculture and home economics is the chief commodity extension has to offer people. There is no substitute for sound technical training. As Paul Leagans 1/ says "to undertake to teach what one does not know is to invite failure from the start." An extension worker must have thorough basic knowledge of technical information appropriate to his job and must keep abreast of current material. To do this he must know reliable sources of information. Furthermore, he must understand how subject matter relates to problems of farming and living.

Extension Service Organization and Operation - Every extension worker needs to know the objectives of the service, understand its organization, be familiar with its policies and understand office management, business procedures, personnel responsibilities and qualifications at all levels.

Human Development - He requires understanding of human development processes, behavior patterns, group dynamics, group interactions and skills in human relations. His success depends to a large extent upon the relationships he develops and maintains with farmers and villagers, local leaders, his colleagues in the extension service and with officials of other agencies and services.

1/ J. Paul Leagans - Criteria for an Effective National Policy for Training an Extension Staff, presented at Khartoum, Sudan April 1964, to participants in the National Extension Seminar.

Program Development - Developing, executing and evaluating educational programs in cooperation with local people is the basic function of field extension workers. All extension personnel must understand the processes involved in order to make their respective contributions.

The Educational Process involves the principles of learning, the learning process, how to motivate people and the methods and techniques of teaching.

Social System - To work effectively with his people an extension worker needs to understand basic social organization including reference groups (family, church, community, power structures, how to identify local culture, social, economic etc), how to identify and develop leaders, group and social action processes.

Communication - The ability to communicate effectively can be developed and improved. It involves speaking, writing, counseling, demonstrating and the use of group and mass methods.

Research and Evaluation - Extension personnel need to be able to measure the effectiveness of programs and the methods used, to understand the experimental approach and to assist people in evaluating their own efforts.

In addition to general training for all staff members, special instruction is needed for each segment of the extension staff. Each must understand his specific role and the specific subject matter involved. He must develop special job related skills.

The following groups need the special types of training indicated: [1]

1. For specialists
    - Role of the specialist;
    - Intensive training in the subject matter specialty;
    - The specialist's function in extension program building;
    - Effective techniques in extension teaching;
    - Working relationships with other staff members; and
    - How to analyze and interpret economic and social data.
2. For supervisors
    - Role of the supervisor;
    - Broad training in technical agriculture, home economics, and in their application to current rural problems;
    - Public relations;

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[1] Extension Development Around the World - Federal Extension Service, U.S. Department of Agriculture and Agency of International Development, U.S. State Department.

- Personnel selection, interviewing, counseling;
- Job analysis;
- Personnel management, evaluation, and training; and
- Program development and supervision.

3. For local extension workers
    - Training in applied agricultural and home economics science at a level high enough to merit the confidence of local people; and
    - Skills in demonstrating improved farm and home practices.

4. For administrators at all levels
    - Role of the administrator;
    - Principles of coordination and direction; and
    - Personnel management and development.

5. For secretarial and clerical extension workers
    - Meeting the public and giving out information;
    - Office housekeeping; and
    - Records, reports, and filing.

Most extension personnel enter the extension service at the local level. Supervisors, specialists and administrators can work most effectively if they have experience working directly with rural people. This experience gives them first hand knowledge and understanding of problems faced by farmers and villagers in changing their methods of farming and living, how technology may be applied under varying conditions and most important an appreciation of the vital role of human relations in extension work. For these reasons we will emphasize the training of local extension workers with appropriate reference to the training of other categories of extension personnel.

Four broad categories of extension training are generally recognised. These are: (1) pre-service, (2) induction, (3) in-service and (4) graduate or sometimes called promotional training.

Pre-Service Training

Pre-service training refers to the professional training received prior to appointment to the extension service. This includes a diploma in agriculture or bachelor of science degree in agriculture or home economics in the more economically advanced countries. Graduates at this level are not available in sufficient numbers in most newly developing countries and extension services must employ graduates of secondary vocational schools. The latter cannot have the breadth or depth of training obtainable in college or university. But in any case it is essential that the local extension worker be better trained than the farm or village people with whom he works. What he lacks in pre-service academic training must be made up to the extent possible in induction and in-service training.

We shall discuss the curriculum for training of prospective extension workers to the attainment of a bachelor of science degree under the assumption that training institutions in most countries have this as their goal.

Bachelor of Science Degree in Agriculture or Home Economics

Local agricultural extension workers require professional training in two general areas: (1) agricultural science and the technology appropriate to the agriculture of the area, and (2) the social sciences. Home economics extension workers require similar training in the social sciences and basic natural sciences with courses in human nutrition, food preparation, textiles and domestic arts substituted for some agricultural production courses; not forgetting that women are very much involved in agricultural production, especially gardening, poultry and small animal husbandry in many countries.

The agricultural extension worker requires general training in the physical and natural sciences, i.e. physics, chemistry, mathematics, biology, bacteriology, entomology as a foundation for such applied sciences as agronomy, horticulture, animal husbandry and agricultural engineering. In addition he requires a certain amount of concentration in the study of crops and enterprises in the area.

The method of teaching is as important as content. Too often subject matter teaching consists of dull memorizing of generalities and unrelated scientific facts. A central function of extension workers is the application of scientific knowledge in solving problems of agriculture production and rural living. Problem solving through the application of scientific information should be an integral part of the teaching in agriculture and home economics.

In almost all agricultural faculties in the past, the social science area has not been given much attention. The emphasis has been on training in agricultural science and technology. Only in recent years has there grown an awareness and interest in the social sciences.

Di Franco 1/ suggests five areas of study in the social sciences of value to students planning careers in extension. These include:

1. Fundamentals of education
2. Rural sociology
3. Educational psychology
4. Cultural anthropology
5. Agricultural economics

Introductory courses in each of these areas can greatly improve the efficiency of extension workers in conducting educational programs. "Agricultural technology is important but it is only a part of the total picture. Of equal importance is how to put this knowledge to work. This calls for trained agricultural leaders who know modern agriculture, their country environment, their people, their relationships and how to plan, execute, administer and involve the total resources of materials and people to get the job done. The sooner trained talent in sufficient members can be provided, the sooner

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1/ Joe Di Franco - Agricultural Extension Specialist. FAO Rome, Italy.

can progress be achieved. In fact, until this is done, very few real benefits can be expected from extension services or from developmental programs and institutions." 1/

Basic training in agricultural economics is assuming increasing importance for extension workers throughout the world. Agriculture is becoming more and more specialized; modern farming requires constantly increasing investment of resources; efficient marketing is as important as efficient production; and skillful management may mean the difference between success and failure. Training in money management and the wise use of credit is becoming an essential feature of extension education.

Ability to communicate effectively is essential to success in most professions and particularly so in extension education. Courses in spoken and written communication are essential elements in the preparation of prospective extension workers at whatever level training is given.

Opinions differ as to the time and place for specific training in extension organization and methods. The need for such training is not questioned. Some colleges and universities include such courses in their undergraduate programs while others postpone such training to the induction period and continue it in in-service training. In the United States in particular, less emphasis is presently given to training in extension methods and more emphasis to fundamental training in the social sciences. Many extension administrators feel they can provide better training with more direct application as induction and in-service training. A further advantage is that participants in in-service training include only employees of the extension service having a genuine interest in the subject, rather than a large proportion of students planning other careers and having only academic interest in extension education.

In many countries however, students may already be committed to extension careers and are definitely interested in practical aspects of extension education.

Sub-Collegiate Training in Agricultural Extension 2/

In many developing countries the extension service draws a substantial number of personnel from among the graduates of secondary agricultural schools and institutes of lower than college or university level. This is because they do not as yet have a large enough number of men with bachelor of science degrees in agriculture to fill the extension posts. Another factor is that in many developing countries a preponderant number of students in agricultural colleges and universities come from towns and cities and have never done any practical work on farms. Thus, they lack the intuitive understanding which men who grew up working on a farm have regarding cropping practices and the handling of animals. This is very important for extension agents who try to teach farmers improved farming methods. Many urban youths tend to look down on farmers as ignorant peasants and thus are often unable to establish friendly relations with working farmers on a plane of equals. Furthermore, young men reared in towns and cities are reluctant to live in villages and want desk jobs in government offices.

For these reasons it has been found that at the present stage of rural development in many countries, young men who grew up in villages and completed an agricultural course at the sub-collegiate level, often prove to be more effective extension workers in stimulating farmers to put improved production practices into use. As the educational level of the majority of farmers rises and more young men with farm background graduate from the agricultural colleges and universities, possession of the bachelor of science degree in agriculture will doubtless become a requirement for employment as an extension farm or home advisor as it now is in America, Europe, and a number of developing countries.

1/ Joe Di Franco - Agricultural Extension Specialist. FAO Rome, Italy.

2/ Gordon H. Ward - Professor of Agricultural Economics, Faculty of Agricultural Sciences, American University of Beirut, Lebanon.

In general, the training given in secondary agricultural schools and institutes tends to be more practical and less theoretical than that in colleges and universities. Relatively little chemistry, physics, biology, and higher mathematics are taught. Thus, the scientific basis for modern advanced production practices in growing crops, fruits, animals, and poultry has to be much simplified or omitted from the subject matter taught in the secondary level.

Very few sub-collegiate agricultural schools include in their program of instruction the agricultural social sciences of agricultural economics (including farm management and marketing of farm products), rural sociology, and extension methods and education. Since World War II, a growing number of these schools have added a course in extension, or are including the subject in other courses. They include:

- Eastern Caribbean Farm Institute, Trinidad
- Moore Plantation School of Agriculture, Ibadan, Nigeria
- East Pakistan Academy for Village Development, Comilla
- Extension Training Centers for Village Workers in India
- Ambo and Jimma Agricultural Schools, Ethiopia

In Ethiopia, the extension service employs graduates of the Ambo and Jimma Agricultural Schools as local level extension agents. Men graduating from the Imperial Agricultural and Mechanical College at Alemaiya are engaged for the posts of extension specialists in the various lines of production such as field crops, animal production, poultry production, and as extension training specialist. The college graduates are given a period of induction experience as assistant agents with a successful experienced agent to learn at the grass roots how extension work is done with farmers who mostly lack formal schooling. The specialists who demonstrate promise in their work for a few years are sent abroad for training at the master of science degree level to up-grade their knowledge and skills.

In Egypt, graduates of secondary agricultural schools are hired for posts of assistant extension agent whereas graduates of the faculties of agriculture of the three universities go into the posts of extension agent. An agent is in charge of the extension program in a markaz or county in which there may be 50,000 farmers living in up to 50 villages. Extension headquarters in a markaz are in a government agricultural center. The assistant agent is in charge of the demonstration fields, growing of plants for sale to farmers at low prices, care of the stallion, jack, and bull for up-breeding the farmers' animals, and supervision of the demonstration flocks of chickens and the rabbit cages. The extension agent is responsible for the extension program of activities with farmers throughout the markaz.

In the 1950s the Egyptian extension service assigned a few of its agents to the posts of production specialists to assist local agents to develop extension programs in various crops and kinds of livestock. Most local agents did not call upon these specialists to assist them because they knew that the specialists had the same bachelor of science degree as the agents and thus had no greater knowledge. The specialist posts were later abolished and experienced specialists of other departments of the Ministry utilized.

Extension Training Centers 1/

When a nation starts on the path of expanding farm production, the number of extension advisors required is far greater than the existing agricultural schools, colleges, and universities can turn out annually. Besides, their graduates have important and often

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1/ Gordon H. Ward - Professor of Agricultural Economics, Faculty of Agricultural Sciences, American University of Beirut, Lebanon.

vital roles to play in other aspects of agricultural development. Research stations require more trained personnel to work out the new practices, more productive plants, animals and chickens which the extension service teaches farmers how to use on their farms. Thus, new institutions are urgently required to train young men and women with medium level education in the improved production practices developed by the research stations and in extension methods for teaching these practices in ways that stimulate farmers to put them to use on their farms. To meet this urgent need for trained extension workers, India, Pakistan, and some other developing countries have established extension training centers to prepare village level workers in a two year course.

A conference of principals of Indian extension training centers made the following recommendations regarding the program of these centers:

1. Period of training in all states should be one year basic agricultural training, followed by six months extension training.
2. Training should be more realistic and emphasis should be given to the following:
    - Methods and techniques for proper approach.
    - How to conduct a village survey.
    - How to analyze problems and establish local work priorities.
    - How to plan a family and village program.
    - How to understand essential elements of village social organizations such as village panchayats, village leadership, and village functions.
    - How to develop the spirit of service. Morning prayer may include inspirational talks or readings selected for this purpose.
    - How to build up general knowledge. To provide for this, an information room should be set up in each center with charts and maps of India and of the state concerned, and other information material; and competitions should be held among the trainees.
    - How to plan, prepare for and use various extension methods and media.
    - How to evaluate a village program.
    - How to use the services of the technical staff.
    - Use methods to solve problems as a chief feature of training and teaching methods that help to develop the trainee's ability to think.
3. Practical work at the training centers should be more job-related and problem-oriented.
4. Group discussion is recommended as the main method along with lectures.
5. Principals of training centers and other staff should be allowed to visit projects and to meet the trained village level workers so they can evaluate the training and know what problems the village worker faces.
6. Each training center should select one village for intensive overall development and beautification.

Training women as village level workers:

There is a need for more women workers to conduct home economic activities with village families. Home science wings should be added to as many training centers as possible to train women in the following:

- Home crafts - clothing construction, knitting, and needlework.
- Nutrition - food preparation and preservation.
- Maternity care and child welfare.
- Home improvement and sanitation.
- Kitchen vegetable and fruit gardening.
- Family budgeting
- Family planning
- Poultry and duck raising
- Youth activities
- First aid and household nursing
- Prevention of disease

The curriculum for a two year course for training local level extension workers in such a center includes both theory and practice, courses in both production practices and extension teaching methods. The number of periods devoted to the various subjects is shown below.

Indian Extension Training Centers Model Syllabus

Two Year Course for Village Extension Workers

Subjects	Number of Periods of 45 minutes	
Farm Production Subjects	Theory Lectures and Discussions	Practical instruction in the Center
1. Soil management and agricultural engineering	210	120
2. Crop production	210	120
3. Horticulture and plant protection	280	170
4. Animal husbandry	270	140
Total production subject periods	970	550

Subjects	Number of Periods of 45 minutes	
	Theory Lectures and Discussions	Practical Instruction in the Center
Social Education		
1. Its meaning and scope	6	
2. Basic education	10	
3. Adult education	18	
4. Organization of exhibitions, festivals, and field days.	11	
Total credits in social education	45	25
Supporting Subjects		
1. Elementary rural sociology and psychology	17	
2. Mobilization of village institutions	14	
3. Development of local leadership	11	
4. Farm youth activities	17	
5. Manpower mobilization	2	
6. Grants-in-aid and loans	8	
7. Small savings drive	3	
8. Land consolidation	5	
9. Village revenue records	3	
10. Reports and records of the village level worker	15	
Total credits in supporting subjects	95	55
Cooperatives	160	140
Panchayats	130	70
Public health	180	110
Rural Industries	100	100
Minor engineering works	60	40
Total credits	1,850	1,150

From the viewpoint of the director of an agricultural extension service, the most desirable kind of pre-service training prepares its graduates to the extent that they can start work immediately at their posts without any delay for induction training. The Indian extension training centers apparently prepare their graduates for their jobs with only a minimum of orientation required regarding the functioning of the local extension service.

The graduates of these extension training centers with a two year program do not have the depth of training or the foundation in basic natural and physical sciences taught to the students in the four-year bachelor of science course of study. For every 10-15 of these village-level workers, there is a better trained extension worker at the block or union level who supervises and guides their work. This supervisor helps the agents in his area with their problems and supplies the knowledge and skills needed to supplement that of the village extension personnel.

Induction Training [1]

Induction training is the training given new extension personnel after they have been employed and before they are assigned to work in a particular area, usually as an assistant agent or advisor. When an extension service is first established in a country, the entire staff from director and deputy director, administrators and national level specialists, down through the area supervisors to the local level personnel, all need special training to prepare them for their particular jobs and to give them understanding of what agricultural extension is, its principles, objectives and philosophy, and methods of teaching farm people the improved practices recommended by the extension service. Induction training for all new extension personnel should develop an attitude of personal dedication to the service of rural people. This kind of training is to supplement whatever pre-service training the new personnel may have had.

Adequate and effective induction training of new extension personnel should:

1. Help the new worker to know the history, objectives, scope and philosophy of his country's extension service.
2. Acquaint him with the extension organization he has just joined, its policies and procedures.
3. Help him to understand what his responsibilities are to the extension organization and the advantages of extension as a profession.
4. Help him to understand well the kind of moral conduct and behavior that is expected.
5. Help him to understand the rules and regulations that apply to his job.
6. Help him to know the job he is expected to do and how he should do it. Train him in teaching methods and subject matter that apply to his work.
7. Train the worker in practical agricultural skills required in his work, not provided through previous training and experience.
8. Help him to know and understand the problems of the people in the area.

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[1] Gordon H. Ward - Professor of Agricultural Economics, Faculty of Agricultural Sciences, American University of Beirut, Lebanon.

9. Help him to understand the working conditions in the extension service and how to make the best of them.

10. Help him to develop a wholesome attitude toward public service.

Induction training is frequently divided into three parts:

1. Classroom instruction regarding the organization structure of the extension service, operation procedures and reports, subject matter regarding farm production and home economics, and the various extension methods appropriate for teaching different kinds of subject matter and related skills.

2. Observation of work in progress at government research stations and farms, the activities carried on by successful local farm and home advisors, demonstrations and field days.

3. Supervised field training in which each trainee is assigned for apprentice work with a successful advisor to work for six months to a year to learn the various extension activities and teaching methods by doing them under guidance and supervision.

Classroom instruction needs to be combined with observation of how the extension methods being taught are actually applied in extension work in nearby farming areas and how the knowledge being acquired is used. The trainees learn how to apply the knowledge they acquired during the two to six weeks induction training and work six months or a year as apprentices or assistants under the guidance of a skilled extension agent at the local level. Each trainee performs all the various jobs involved in agricultural extension work. When his trainer is satisfied that he can perform as an assistant farm advisor on his own initiative with minimum direction by a senior advisor, the man is assigned to an assistant advisor post in another area.

The nature and extent of induction training required to prepare new personnel to carry out duties of an assistant extension farm or home advisor satisfactorily depends upon the kind and amount of pre-service training the individuals may have had. If the new staff members have graduated from an agricultural college or university in agronomy, animal husbandry, or another of the fields of agricultural production, or from the general agriculture curriculum, they may need little or no instruction regarding production matters. Unless the institution from which they graduated was one of the relatively few that have courses in extension teaching methods, these subjects should make up the major part of the induction training course. This is the situation in Ethiopia, Lebanon, and Jordan where the great majority of the local level farm advisors are employed following graduation from secondary level agricultural schools. King Husein Agricultural College in Jordan has recently inaugurated a semester course in agricultural extension at the junior college level. Some of the secondary agricultural schools in Egypt now have a series of lectures on extension work by officials of the extension service as part of their pre-service training. This material is reviewed and supplemented with additional material and topics in the induction course of training.

The curriculum for the six weeks induction training course given in the extension training center conducted by the Jordan Agricultural Extension Service illustrates the nature and scope of such training programs.

Jordan Agricultural Extension Training Center

Curriculum for Six Weeks Induction Training Course

For New Personnel

Subjects Studied	Number of Hours
Agricultural production subjects	
Agronomy	2
Animal husbandry	2
Horticulture	2
Plant protection	2
Farm machinery	2
Extension methods	
Extension objectives, philosophy, organization, program planning, teaching methods, evaluation	40
Audio visual aids	18
Extension youth clubs	5
Recreation for youth club members	5
Education	
Adult education	5
Health education	8
National education	6
Supporting subjects	
Agricultural industries	8
Cooperatives	14
Library science	3
Reports	2
Total periods in classroom courses	124
Field work and practice under supervision	10 days

Relatively little time is devoted to farm production subjects because the men have at least three years of study of these subjects in the secondary agricultural school. The main job of the training center is to give the new agents training in effective methods of teaching the subject matter they learned in the agricultural school. As they progress in their work as assistant extension agents in an assigned territory, they will have refresher courses of a few days, a week or longer to up-date their knowledge and skills in various lines of farm production.

In-Service Training [1]

Broadly speaking, in-service training includes all forms of training for professional extension personnel during their period of employment by the extension service. It may involve both on-the-job training and training while away from the job on educational leave. There are numerous forms of on-the-job training whereas most educational leave is spent at an institution of higher learning in post-graduate study which leads in due course to a diploma or an advanced degree. However, extension personnel who do not have their bachelor of science degree are not eligible for a post-graduate degree. They may work for a bachelor of science degree, take diploma courses in various aspects of extension work, or study in various refresher and summer school courses.

Of the numerous forms of this kind of training only the more important will be discussed.

Annual Staff Conference

The extension service in most states of the United States holds an annual conference of all the professional staff members. Some of these conferences continue for an entire work week. In other states they begin Tuesday morning and end Friday afternoon or evening to allow the local personnel time for travel from and to their posts. Generally, the conference is held at the state university where the director and administrative staff have their offices. This permits using members of the teaching staff of the university as speakers.

The program for such conferences generally has four parts. The first consists of discussion of administrative matters and policy questions which the administrators believe are preferable to present to the staff in person in order to avoid misunderstandings and to permit questions to clarify any points that may not be clear. The second aspect aims to inspire the men and women taking part in the extension programs and to give them a broader vision of the importance of their work. They return to their posts with renewed zeal and belief in themselves, farm people, the program in which they are working, and democratic action in rural communities.

A third emphasis deals with subjects related to more effective extension teaching. In addition to considering improvements in well established methods, speakers discuss various subjects which will help extension workers to understand and motivate people. They may present the findings of a recent research study in rural sociology which will give extension greater appeal and usefulness to farmers and their families. A professor of psychology may present ways of attracting more farm people to participate actively in the local extension program. Extension personnel may need instruction in the special techniques of radio and television communication.

The conference program usually includes training in the latest rural developments such as cooperatives, rural electrification and telephone service projects which concern farm women as well as farm men. Men agents and women agents hold separate sessions for certain subjects, such as animal and crop production, farm management, home improvement, nutrition and foods, child care, and clothing. The extension specialists and research personnel in these various subject areas usually present the topics of these sessions.

There is not enough time during an annual conference covering so many and so varied subjects for thorough study of subject matter. Consequently, only new developments are explained briefly. Technical subjects are dealt with in more detail in training sessions held in the areas where the topics are of greatest importance in the extension program.

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[1] Gordon H. Ward - Professor of Agricultural Economics, Faculty of Agricultural Sciences, American University of Beirut, Lebanon.

Local Area Training Sessions

This term is used to cover any kind of training of local level personnel lasting from half day to a week and conducted within an area where the particular subject matter is applicable. A half day training conference may be held in a livestock producing area when a new government regulation is to go into effect regarding testing milk cattle for contagious abortion. The agricultural extension workers in the territory around a central market town to which travel for them is convenient are called to a meeting in that town. The government veterinary officer is on hand to explain the regulation, what is to be done, why it has to be done, how the regulation will be carried out, and the educational role to be played by the local extension personnel. The district extension supervisor stresses what the agents are expected to do in the program. The livestock extension specialist explains ways of teaching farmers about the test, and how to use the test to build up a disease-free herd.

Short Courses

As the name indicates, the period of time extends through one or two weeks, whereas, refresher courses continue for a month or longer. Generally, short courses and refresher courses are given on the campus of an educational institution, such as a secondary agricultural school, an agricultural institute, an agricultural college, or an extension training center. The distinguishing feature of a short course is that it concentrates intensively upon one subject and important supporting topics. It may deal with milk production and cover housing, breeding, feeding, controlling common disease, and the management of animals and the dairy enterprise. In addition to the extension dairy specialist, other specialists from the research station present the findings from studies of various aspects of the production of milk. Suggestions are offered regarding how farm advisors can use the information gained in the short course for teaching farmers improved practices in producing milk.

Refresher Courses

Refresher courses usually extend for four to six weeks and cover the supporting subjects as well as the main theme such as broiler production, or a broader subject such as extension education methods.

The curriculum or program of study for a six-week refresher course given to district agricultural assistants in Sarawak in the spring of 1962 illustrates this type of in-service training. The course included both technical and extension subjects grouped as follows:

1. Technical subjects - rubber, pepper, rice, fruit tree management, inland fisheries, pest control, land tenure, and home economics.

2. Extension subjects - personal contacts, programs, records and reports, photography, operation of projectors, drawing and composition of visual aids, country dancing and party games.

The 11 agricultural assistants selected to attend the course were chosen from among the superior performing assistants who had:

- Adequate practical experience in the field.

- Skill in human relations with his colleagues and the public.

- Intelligence to learn new ideas and to think.

- Ability to handle an increasing measure of responsibility for the leadership, advising, and supervision of junior personnel, and maintaining proper two-way communication between them and the agricultural officer.

The course was divided into three main parts as follows:

Part 1. Orientation in extension education, 24 to 30 April, Extension Training Center, Tarat.
Instruction was given in the principles and methods of agricultural education. After brief orientation and motivation, the basic extension course normally given to junior agricultural assistants and home demonstrators was condensed into a highly intensive week of theory and methods.

Part 2. Field practice, 1 - 19 May

Doing the work of a junior agricultural assistant in extension in five hereto unworked village communities in teams of two or three. Each team was visited twice for consultation and advice during this period.

Part 3.a. Review of field practice, 21 - 26 May, Extension Training Center, Tarat.

A guided review of the three weeks practical experience was followed by a study of the duties of a district agricultural assistant and instruction in his extension responsibilities, including practical supervision and leadership of extension teams in the field.

Part 3.b. Winding up training, 28 May - 1 June, Sarawak Civil Service Training Center. Kuching.

Instruction was given in supervision, public relations, and in files and filing.

The agricultural assistant's evaluation of the course showed that the phasing of instruction and practice, first in the extension job and secondly in the job of supervising extension, was about right for officers of their experience. The three-week assignment at village level was a valuable and, on the whole, enjoyable experience and a necessary preliminary to the supervision of workers at village level.

Training Courses

Extension services in various parts of the world arrange and conduct in-service training courses according to the needs of their personnel. In New York State in the United States for example, the extension service engages young men and women who have recently graduated from the college of agriculture and the college of home economics. Few if any have studied formal courses in agricultural extension methods. After a brief period of two weeks of induction training dealing mainly with explanations regarding the organization and functioning of the extension service and how they are expected to work as assistant agents in training, they are sent to their posts for apprentice training for six months to a year. One of the requirements for new agricultural agents is that during each of the first three years on the extension service staff, they will spend three weeks each summer studying extension methods and the subject matter regarding farm production, farm management, and other subjects important in the area where they are serving. They learn to see clearly the connection between what they are learning in the classroom and the problems that farmers and homemakers have been bringing to them in their daily work. This makes them take more interest in the training and delve more deeply into the subject matter they are studying.

In countries in the process of building up the extension service it is often necessary to employ as farm and home advisors young men and women from the villages. The formal education of such persons may not have gone beyond elementary school. They are started on their village assignments in extension work after a two to four-week period of induction training. This covers mainly the principal extension methods to be used in the villages to which they are assigned. They need additional training in both scientific agriculture and home economics in addition to extension methods.

The curriculum for such an in-service training course developed by Mr. Gray and Miss Loraine Stevens, US/AID extension advisors in Jordan and Professor Gordon Ward of the Faculty of Agricultural Sciences of the American University of Beirut to be taught at the AUB Farm illustrates the extent of the subjects to be included in this type of in-service training project. It was planned to have the course open to local level extension workers from Arabic speaking countries with most of the instruction in that language. At the time the training course was planned no comparable training was being given in the region.

Subject		Periods of 50 minutes
Joint Instruction for Men and Women Agents		
Extension philosophy, goals, objectives		6
Extension methods, program planning, work schedules		36
How to work with farm people and help them organize		18
Youth training projects and club programs		6
Training local leaders		6
Extension teaching methods		36
Total hours		108
Producing and handling milk, making milk products	3 weeks	18
Poultry production	3 weeks	18
Vegetable gardening	3 weeks	15
Flower and landscape gardening	3 weeks	15
		66
Separate Instruction for Farm Advisors		
Field crop production	3 weeks	15
Fruit production	3 weeks	15
Animal production	3 weeks	15
Plant protection	3 weeks	15
Total hours		60
Total instruction hours		234

Subject		Periods of 50 minutes
Separate Instruction for Home Advisors		
Sewing, clothing, and handcrafts	5 weeks	15
Home improvement and management	3 weeks	15
Food preparation and nutrition	3 weeks	15
Home sanitation and hygiene	3 weeks	15
	Total hours	60

Workshops

A workshop is just what the word implies, a working conference. Participants and staff live together at a selected location for one, two, or more weeks. Its distinctive feature is that each participant brings with him a personal professional problem upon which he wants to work with the help of the staff. A group project common to the majority of the areas represented can also be an important part of the sessions in order to train the participants to analyse the problem, determine the procedures to use in finding a solution, secure adequate and current information necessary for the solution, activate an agreed solution, and evaluate results.

With these two major objectives, a daily workshop schedule might include the following:

8:00 - 9:30 A.M. Discussion groups

Subject matter content based upon needs discovered by a pre-conference survey of the extension workers expected to attend.

Leaders are extension staff members with special qualifications and visiting specialists.

10:00 - 12:00 Group project (general and within the experience of all)

Developed from start to finish by participants and staff together.

2:00 - 5:00 P.M. Individual problems

Each participant works upon the problem he brought with him. Staff members are available for consultation upon request of an individual. This can be the participant wishing to sit down with a staff member or a group of staff members to discuss the progress of his work and the next steps to take.

8:00 - 9:30 P.M. General assembly

1. Opening session to set workshop objectives, procedures, work expectancy; to meet and learn the areas of specialty of the workshop staff; to stimulate enthusiasm for the opportunity to work alone and in groups.
2. One evening each week for evaluation of the total workshop program as it is functioning in all its parts; for determining necessary changes in procedure and guidance; for sharing group and individual results to date.

3. One evening each week for an outstanding inspirational speaker.
4. One evening each week for a recreational program planned and conducted by the participants.

The effectiveness of the workshop depends upon a highly qualified staff, a planning committee made up of selected workshop staff members and extension workers working at least six months in advance of the dates set for the workshop, and preparation by the participants. Should two or three workers select the same urgent problem unknowingly they would naturally work upon it together, dividing responsibility for study of individual facts of the problem.

Field Trips or Tours

Field trip or tour of successful extension projects, especially result demonstrations which show clearly the higher output obtained through following recommended improved practices, is a valuable teaching device for in-service training of extension agents. Seeing what other agents have accomplished helps to encourage the visiting agents.

Frequently a field trip or tour is arranged in the country near the place where the in-service training program is being carried on. The projects visited should be directly related to the topics which are being covered by the lectures and class discussions.

Seminars

Seminars can be arranged for a definite group of agents at a convenient place to discuss an important subject of current interest in the extension program such as the Japanese method of rice production which gives a substantially higher yield. By scheduling meetings every week or every fortnight at some central point for a group of 10-15 agents, the training can take place without the agents being away from their posts too long. The sessions should be under the leadership of a well qualified specialist in the field under consideration. He should lead discussions on various aspects of the subject that the members of the seminar have studied through assigned readings. After the introductory material has been covered, each member of the group is assigned one or more topics on which he is to prepare a report and present it orally to the group at a specified time. This of itself is good training in the preparation of talks to be given at extension meetings.

Training by Subject Matter Specialists

Training of local extension workers in technical subject matter and methods particularly effective in relation thereto is a major function of extension subject matter specialists. Such training is accomplished in a variety of ways including:

- Working with the local extension worker on projects in which his subject matter is involved.
- Conducting special training conferences and courses in his subject field.
- Preparation of pamphlets, leaflets and fact sheets for use of local extension personnel.
- Assistance with leader training.
- Assistance with extension program planning.

The extension specialist should always bear in mind that the local extension worker is the official representative of the extension service in his area and do nothing to injure his prestige among local people.

Foreign Participant Training

Many developing countries which lack facilities for adequate training of extension personnel take advantage of participant training programs offered by the more advanced countries. The governments of developing countries themselves finance much of this training but also utilize scholarships and fellowships offered by FAO, bi-lateral programs of technical assistance, foundations and other organizations.

Only limited numbers of personnel can be trained in this manner. It is expensive, few people can be spared from their assignments at one time. For this and other reasons care is essential in selection and programming of participants. The following guidelines are suggested for the effective use of participant training in furthering the development of the extension service:

1. Decide on key positions for which outside training is required and assign priority.
2. Choose participants for selected positions on the basis of demonstrated interest, ability and potential contribution after training, as well as educational background. Do not provide foreign training as a reward for past service.
3. Be sure that trainees have adequate language ability for the type of training offered.
4. State objective of training clearly and concisely in training programs and indicate how training is to be used in developing the Extension Service.
5. Secure a commitment from the participant to return to the Extension Service for a specific period of time, e.g. two years, so that his improved ability can be effectively utilized.
6. Provide the participant with assurance that he will not lose seniority because of absence for a period of time.
7. Arrange programs to provide training in principles, method of applying the principles to the solution of local problems and how to train others upon return to home country.
8. If possible arrange for participant to be trained as one of a group having similar training objectives. Better training can be provided to groups than to individuals,and participants gain through an exchange of ideas and experiences with participants from other countries.
9. Request that training be concentrated in one or two locations and avoid observation tours if training in depth is desired.
10. Make specific and definite arrangements for returning participants to train others in the extension service. Participant training cannot usually be justified on any other basis.

The International Extension Training Center in Wageningen, The Netherlands, offers a four weeks training program each summer in July and August. It is conducted by the Wageningen University, the Netherlands Ministry of Agriculture with the patronage of FAO and the Organization for Economic Cooperation and Development. The Center provides broad training in various aspects of extension education in agriculture, and home economics and related fields. The program provides ample opportunity for discussion and exchange of ideas among participants from 30 to 40 countries each year.

Agricultural Extension and Rural Development Center, University of Reading, United Kingdom - Four one-year full time courses are taught at the Center. There are opportunities for suitably qualified graduates to follow courses for higher degrees by research (M.Phil. and Ph.D.) into basic aspects of extension and social development in rural communities.

Graduate Study and Professional Improvement

After serving for a period in the extension service, many extension workers feel the need for additional academic training, either to improve performance in their present positions or to qualify for promotion. Those aspiring to become subject matter extension specialists will take courses leading to a Master of Science degree in their chosen technical field, with additional courses in extension education. Others will concentrate on the field of extension education with most of their courses in the social sciences. The courses described in this section are available to those in the latter group.

Diploma Course in Agricultural Extension

If an individual can take a year away from his post for specialized training in agricultural extension, the University of Queensland in Australia offers a one-year residential diploma course. The curriculum includes the following subjects:

Course	Content	Number of Hours
Anthropology	Comparative social institutions group	30
Psychology	Group dynamics, role theory, etc.	20
Sociology	Social structure, surveys, statistics, etc.	30
Rural Sociology	Inter-action and communication, values, etc.	90
Community Development	Methods to bring about change, case studies	30
Education	Motivation of adult learning, problem centered teaching, role of extension workers	90
Comparative Extension	Organization and administration in Australia, Britain, Canada, New Zealand, USA, etc.	60
Farm Management	60 hours lectures and 80 hours practical	140
Public Administration	Public administration science, sociology of administration, operation of controls, external relations, case studies, etc. 60 hours lectures and 30 hours seminars	90
Practical Work	One vacation spent interviewing, leading discussions with farm communities	100
	Training in speaking and writing, radio, television	20

Summer School Study

It is general policy in the United States to encourage county extension workers to take extension education courses during the summer school sessions at agricultural universities. Usually the courses studied carry university credit toward the Master of Science degree or the Master of Agricultural Education degree. After studying at summer school for several years, some farm and home advisors obtain educational leave to spend a term or semester at the university to complete the requirements for the advanced degree.

Study for Advanced degree

The time required in study for an advanced degree in extension education beyond the Bachelor of Science degree, or its equivalent, requires from one to two years for the Masters degree and two to three years beyond the Master of Science or Master of Education degree to complete the requirements for the PhD or Doctor of Education. For the Master of Science degree, the number of courses required can ordinarily be completed in one academic year provided the student has previously passed the pre-requisite courses. Generally a period of three to six months is required to do the research and write the thesis. Some candidates for the Master of Science degree in extension education complete their course work at the university and return to their posts to do the research study planned with their faculty advisor and write the thesis.

Two examples of courses of study for this advanced degree illustrate the kinds of subject matter to be covered.

1. University of Missouri, USA

The master of science degree at the University of Missouri Columbia requires a minimum of 32 semester credit hours. Of these, at least 16 must be at the 400 level or above. A semester credit hour is one hour of instruction per week in one subject for one semester of 18 weeks duration. A student is permitted to earn no more than 8 credit hours through off-campus or correspondence courses. The program must be completed within a period of eight years and must be completed with 80% of the grades being B or better.

An advisor is assigned to each student and guides him in the selection of courses for his program of study. An attempt is made to plan each program in line with the student's needs and job aspirations. Courses for the study program are chosen primarily from the departments of Extension Education, Regional and Community Affairs, Rural Sociology, and from the College of Education. In some cases students may take technical agricultural subject matter if this seems desirable.

The master's program is a non-thesis program, but a special problem written up in research style is required of all students. Two to four credit hours are allowed for the research depending upon the details of the project. All students must pass a comprehensive written and oral examination near the end of their period of study.

Courses in Extension Education which are suggested and taken by most students include Fundamentals of Communication, Principles and Procedures in Extension Teaching, Fundamentals of Extension Teaching of Adults, Program Development and Evaluation, and Special Research Problems.

2. American University of Beirut, Lebanon

A total of 36 semester credit hours of work are required for the Master of Science degree in Extension Education. Writing of an acceptable thesis dealing with a research study regarding some aspect of agricultural extension counts for 6 credits.

Approximately two-thirds of the remaining 30 credit should be in the major subject area of extension and the balance in the minor. Usually 9 credit hours are earned in the minor field. A committee of the Faculty of Agricultural Sciences guides the student in planning a program of study covering subjects which will help prepare him for the work he will undertake following graduation, holders of the Bachelor of Science degree in agriculture, or its equivalent, who have studied undergraduate courses in extension work, education, rural sociology and agricultural economics usually can complete the requirements for the Master of Science in one academic year of course work plus about six months to do the research for and write a thesis.

Students who have not studied foundation courses in these fields generally require two academic years to complete the requirements. They devote the intervening summer to field research, collecting data and information for their thesis. The subject areas for inclusion in the program of study for the Master of Science degree are given below.

American University of Beirut
Faculty of Agricultural Sciences

Program of Study for MS in Agricultural Extension

Requirements	Credits
1. Courses in the major field of extension education selected from among the following:	21
Methods of extension education	
Comparative extension methods	
Organisation and administration of an extension service	
Personnel training and administration	
Seminar in agricultural extension	
Audio-visual aids	
Psychology of education	
Social psychology	
Seminar in education and social change	
Cultural anthropology	
Rural social organization	
Rural community development	
Applied rural sociology	
2. Courses in the minor field are to be selected from among:	9
Agricultural economics	
Rural sociology	
Agricultural education	

Requirements	Credits
Education	
Animal and horticulture production	
Soils and irrigation	
Food technology and nutrition	
3. Thesis reporting on original research in some aspect or phase of agricultural extension	6
Total credits for the MS Degree	36

PhD Degree in Extension Education

The PhD degree in extension education is granted by only a limited number of universities. In the United States but four Land-Grant Universities offer this terminal degree, Cornell University of New York State, Ohio State University, University of Wisconsin, and Oklahoma Agricultural and Mechanical University. Affiliated with departments of agricultural education at Cornell and Wisconsin are special institutes dealing with agricultural extension education. At Cornell there is the Comparative Extension Education Program which offers a special program for graduate students from developing countries and for American Extension personnel concerned with extension programs in various countries under the US/AID program. The National Extension Training Center sponsored by the United States Federal Extension Service for advanced training of extension personnel is connected with the Department of Agricultural and Extension Education of the University of Wisconsin.

Cornell University Program of Study for Ph. D. in Extension Education

The Graduate School provides extensive flexibility in course requirements for the Ph. D. degree. The granting of the degree is based upon the recommendation of a committee of faculty members formed to guide each student in a program of study fitted to his particular interests and needs. The committee recommends the student for the degree when it is satisfied with his accomplishments in course study and in writing a dissertation based on original research.

The graduate faculty considers study on the university campus essential. Each candidate for the Ph. D. degree must earn six units of residence beyond the B.S., each term representing a unit. If a student cannot remain in residence continuously, he must apply for a leave of absence. All requirements for the degree must be completed within 10 years after the date of first registration as a candidate.

Candidates for the doctorate must offer themselves for examination in one major subject and in two minor subjects. The following graduate courses are especially designed for extension education students.

Courses	Semester Credits
The Cooperative Extension Service	3
Administration and Supervision of Cooperative Extension Programs	3
Designing Programs of Developmental Change	3
Communicating Technology	3

Courses	Semester Credits
Special Studies in Extension Education	2
Seminar: Comparative Extension Education Systems	2
Seminar: Implementing Extension and Community Development Programs in Developing Countries	2
Seminar: Current Problems and Issues in Extension Education	2
Adult Education	2 or 3
Seminar: International Agricultural Development	0

Candidates for advanced degrees normally study courses totaling 12 to 15 credit hours per term. Upon completion of the program of study of course work set by the students' committee, he is given a comprehensive examination by members of the committee. Most of the examination is oral. When the student has completed his dissertation to the satisfaction of his thesis advisor, he is examined regarding his research and his findings by the committee. Upon satisfactory performance in these examinations, the committee recommends him to the Graduate School for granting him the degree.

National Training Centers [1]

This refers to national extension training centers or seminars organized with the assistance of FAO or some other aid agency. Such training centers are generally held in countries where agricultural extension is still in the early stage of development, and training in extension is offered for the first time. The training is generally designed for extension workers at the national level or the provincial level or both. After receiving the training, they can in turn organize similar short courses for extension personnel at a lower level. The advantage of having such a national extension training center is that a large number of nationals in positions of leadership can be trained at one time under local conditions.

The success of a national extension training center requires thorough preparation and satisfactory arrangements, which are briefly discussed in the following paragraphs.

Objectives of the Training Center

Who will be the trainees? What is their educational background? How much experience did they have in agricultural extension work, and what is the nature of it? What will they be expected to do after receiving the training? These are some of the questions that must be answered before a suitable training program can be worked out for the center.

Size, Location and Duration

For the convenience of discussion, the center should be kept at a reasonable size, not exceeding 40 participants, and they should be seated in a round table formation. Should more people need to be trained, they can be divided into two or more separate classes, held in succession.

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[1] C.W. Chang - Agricultural Adviser, Asia and the Far East Region, FAO
Bangkok, Thailand.

Wherever possible, the training center should be located at a regular training institution such as an agricultural college or an agricultural school, in the hope that the training institution will offer such short term training courses by itself, after gaining this experience. If accommodations permit, the trainees and instructors should live together thus providing more opportunity for personal contacts.

Depending upon the level of the trainees, the training center may last from two to three weeks. If it is too long, it will be difficult to maintain a high level of interest, nor is it possible for a group of high level people to be away from their jobs too long.

Courses of Study

The training center may be devoted entirely to the area of "how to teach". This may include such subjects as Extension Education or Comparative Extension Farmers' Organization and Leadership Training; and Extension Teaching Methods and Teaching aids. Or the training center may also include two or more subjects from the technical fields or the area of "what to teach". Then such subjects as Seed Multiplication and Distribution, Fertilizer Use, Insecticides, Farm Management, Marketing, and Farm Mechanization may be added. Having subjects of both areas included in the training program will make the training more meaningful and substantial. However, the major emphasis should be laid on "how to teach". Technical subjects can be offered any time for one or two days when the need arises.

Village Surveys and Program Planning

For this purpose a village of 50 to 100 farm families should be selected in the neighborhood of the training center so the trainees can make a general survey or several special surveys, during the training period. All the instructors of the center will need to visit the village beforehand, and decide on the nature and the scope of the surveys to be undertaken as a part of the training program. By proper arrangements, all the surveys can be finished in one day. During the next two class periods of two hours each, the information thus gathered can be tabulated and written in report form by the groups of trainees who conducted the survey. The instructors will go over their drafts, and piece them together to form a complete report for the village. Then one morning session should be set aside toward the end of the training center for discussion on program planning, based on the survey findings. Trainees selected for the purpose may act the part of village elders. At this meeting, the extension education instructor should play the role of an extension supervisor. After explaining the purpose of the meeting, he will call on the leaders of each survey group to report on their survey findings, as if they were village level workers. This will be followed by a general discussion in an effort to define the problems, decide on objectives, and to suggest measures for improvement. If the director of agriculture and some of his senior research and extension officers are present, they should be asked to comment on the recommendations and suggestions reached. If the discussion is well planned and well conducted, it can be finished in one morning session. This should be the climax of the training course. As a result of their active participation in making the surveys, reports and discussion trainees learn how to proceed with their work, and appreciate the value of the training.

The village under survey should be made a pilot village for demonstration and training purposes and the conduct of an on-going extension program. Otherwise, villagers will receive no benefit from their cooperation.

Involvement of the Trainees

It is important to involve villagers in program planning and program implementation, to make sure that the program is based on their needs and interests. Similarly, the trainees should be represented in the staff meetings of the training center, so their views can be expressed, and to assure that the instruction is adjusted to their capacities and requirements.

Awarding Certificates

It is a good practice to give public recognition to the participants for worthwhile achievements. Awarding of certificates signifying satisfactory completion of the training course serves this purpose.

Evaluation should be undertaken periodically and at the end of the training program. This will serve several purposes. First periodic evaluation will guide the staff in adjusting and improving the program from day to day according to the reaction of the participants. Secondly a terminal evaluation will provide information useful in improving future training centers. Finally and most important it will serve as a demonstration to the trainees on the use of the evaluation process in extension teaching.

Career Development Tasks [1]

The Individual as a Unit

In recruitment and selection of extension personnel for employment, we pay close attention to an individual's background and previous training. Once we have employed a person, however, we tend to lose him in the group and forget about training him as an individual.

If we want efficient training, we will examine the individual's previous training to find areas in which he is strong or weak. The transcript of college credits can be our tool for trying to understand the individual's previous background and experience. The information on strong points or gaps in previous training can be used to eliminate some agents from certain kinds of training altogether and for grouping others in order to provide training. Job descriptions, personal inventories of training needs, or performance evaluations are other tools for determining an individual's need for training.

This is one aspect of the Unit Approach. Now let's turn our attention to another.

Career Stages as Units

We have given a good deal of thought to the first year's training for new workers. It might be said that we pour all we know into employees in the first year and then we repeat this same 'dose' over and over throughout the career life of the worker. In contrast, we need to think of the natural stages in an extension career and determine the type of training appropriate to workers at each stage.

From a study of human development processes we know that the child study scientists working in this field speak of the 'developmental tasks' of children and youth. They have identified these tasks as:

1. Accepting one's physique.
2. Achieving new relations with playmates of both sexes.
3. Achieving emotional independence of parents and other adults, etc.

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[1] Expert from "Career Development Tasks" ER & T-91 prepared by Mary L. Collings, Extension Training Branch, Federal Extension Service, United States Department of Agriculture, Washington, D.C. USA.

There are these three and six other tasks, making a total of nine developmental tasks. These tasks the scientists have identified by thinking back over their own lives, by questioning boys and girls to find out what their principal interests and concerns are, by observing boys and girls to find out what their goals are, and by analyzing the values of our American society. Those who have studied in this field of human development speak of children 'working on' one task or another at certain stages of their development.

Borrowing this concept, we can apply it to an extension career. Each extension worker has career developmental tasks to do, each must grow in the career he has chosen, each must work on the tasks one at a time; or do all of them at once if he has the courage to do so, though some tasks are more appropriate at one stage of the career than at another. Then, secondly, training should be geared to help agents undertake each task in sequence at the stage of his career when each is appropriate.

What are these career developmental tasks? Without the benefit of scientific experimentation or study in this area, we can only surmise that there are six tasks.

1. Establishing one's self in job performance

The new worker must first find a place for himself in the county and prove to himself that he personally can perform the teaching function assigned him. He must show himself and others that he can make personal contacts with lay people and be accepted by them; he must show himself that he can interpret scientific information and apply what he learned in school in a good demonstration; speak to groups in public meetings and over radio; write news articles that are printed in the papers and read by people he may never know personally. He must show himself that he cannot only plan for his own activities but can direct the work of a secretary and other office staff in an efficient way. This is his first task. If we accept this as the first task then the new worker training should be focused solely, or almost exclusively, on the worker himself as a performer.

2. Achieving team status

Close on the heels of the first task, the extension worker learns how to make himself a member of the team of county and state extension workers. The USDA News Letter recently quoted Brewster Jennings' words on teamwork: "Man's greatest discovery is not fire, or the wheel, or the internal combustion engine, or atomic energy, or anything in the material world. It is in the world of ideas. Man's greatest discovery is teamwork by agreement."

Teamwork, at times, seems harder to achieve than the secret which unlocked the process of controlling atomic energy. In this second stage of his development, the extension worker must come face to face with the fact that he can no longer think of himself as a solo performer but as a member of a team. He must begin to identify himself in his own mind with other phases of extension work than his own. He must recognize his obligation to develop as much understanding and appreciation for the work of those in agriculture, home economics, or 4-H Club work, as the case might be, even as much concern for the success of other staff members in these other phases of the work, as for his own.

This is not achieved by an hour's talk at an induction training conference. It comes about the hard way—by repeated opportunities in training sessions and in day-to-day activities to develop a feeling for 'our' program and 'we county staff members'. Some personnel never learn this task. Our second task in training, developing teamwork, is one of our most important tasks.

3. Achieving organization mindedness

Extension work has built up an enviable reputation for organizational ability. At great expense of human evergy and even in staff turnover, perhaps, we have built this reputation and this organization. Learning to build and work through a lay organization, though it is complicated, has been for some of our personnel relatively easy. They learn it in the first 2 or 3 years of employment. Some never learn it though they may stay on the job many years. These latter persons, perhaps, have the wrong 'role perception'. This term is used quite a bit these days, meaning the images a person has in his own mind of what he wants to believe about himself and his job and what he wants others to see in him. Some agents see themselves as servants of the extension organization and go about doing endless chores for it. They are never able to take a step back and allow leaders 'to learn by doing,' to make their own mistakes, to do their own thinking, to give guidance but not direction, to draw people out, not tell them what to do.

This third task is one of setting members of our groups free and helping them to become effective and responsible leaders in the extension organization. This seems simple enough. Yet the first career task of learning to perform themselves makes some agents continue to think of themselves as 'the indispensable man.' They can never cease to be the organizer themselves and train leaders to become the organizers, to work through leaders instead for leaders.

In our training of agents in organization and leadership development and in program planning we have not grounded all agents thoroughly on techniques for building a sound, effective, self-perpetuating organization. This is the reason that some county extension organizations fold up when experienced agents are replaced by new workers or when leaders move out of the county. With rapid turnover, stability for extension work comes through the leaders, not the agents. We need to think through more carefully what sort of training is needed to help agents learn the task of organizing and conducting their work in such a way that leaders are involved more and agents less in mending 'organizational fences.' We need to think more of procedures that are used to get county organizations to plan for their own program and for their own expansion, to rotate leadership responsibilities, to use past leaders to train incoming leaders for program planning and to work out contacts with other agencies, to name only a few organization 'fence mending' jobs that need to be done by leaders, not agents.

Perhaps we try to teach these things too soon in the career of immature agents and we get poor results or complete defeat. Then we allow experienced agents to get in the rut of being work horses for their county organizations. Surely there is a way to analyze what the training for this developmental task is and provide it at the time when it is appropriate and will be understood and applied.

4. Becoming management-conscious

Closely allied to the previous career tasks is the fourth one, to become management conscious. Some of our workers are so pressed for time that they are literally a menace to recruitment of new workers. With the growing pressures of the job, they lose control of their own destiny, sacrifice their serenity, and give way to self-pity. All agents are equal in one thing, the amount of time given them to do the job. That some of them are more effective than others is due in large part to management. The poor manager can inherit from his predecessor a good extension program and wreck it. Many of our agents have had little opportunity in college to learn the principles of management as applied to time, or anything else. Business experience, perhaps, has contributed to preparation in time management, but this is not a guaranteed bonus from such experience.

We are trying to teach management to farm and home development families. The same decision-making process needs to be used in considering the professional's use of time. The new worker's job is to find something to put into his time schedule; the experienced worker's task is to decide what to take out.

When pressures begin to mount, training can be directed toward helping the agent analyze the whole job, decide on important things to do, set up procedures for meeting different sorts of demands on his own time, attack each job directly, arrange good sequence (doing most important things first), delegate jobs and train helpers, and analyze his own personality to better understand how to adjust his work order if he is a 'slow starter' or an 'easy tirer.'

In his role as an educator, the agent must adjust himself to the slow process of working through others at the pace they can learn. In this role as an executive the agent must learn to regulate his own activites so as to produce with reasonable cost of time, according to a design or plan. The latter role requires that he know something about management but even more that he believes that he is, at least to some extent, master of his own fate when it comes to time use and a decision maker, not simply a victim of his job.

5. Achieving a professional attitude

The fifth development task is one that is assumed when the agent takes a professional job, i.e., to become truly a professional in attitudes. But it takes time to achieve. If the extension worker has a professional attitude he not only thinks of what he gains from being classed as a professional but of what he contributes to professional standing for the Cooperative Extension Service. To be classed as a professional, workers must accept for themselves the characteristics of a profession, such as:

- a long period of specialized preparation or training,
- a code of ethics which governs individual behavior,
- high work standards,
- willingness to accept responsibility for one's own actions,
- a self-administered organization, etc.

To be truly professional, an extension person must take an experimental attitude toward his work. He must develop insatiable curiosity as to what works and why. He must search continually for the better way, see extension work as an intellectual adventure—requiring ingenuity and initiative in meeting the succession of problems which constitute the day's work. He will go out after more training for the personal satisfaction of acquiring more knowledge and for the privilege of associating with the great ideas of the world, not solely for the extrinsic values of promotions, salary increase and the like.

6. Making way for one's own replacements

The sixth and last career developmental task perhaps is making way for one's own replacements. In a certain sense, each experienced worker who has been given an assistant at that point in his career may be faced with this task. This is something that the professional faces which is much like the situation that the first child goes through on the advent of the second, third, and fourth child. Yet we associate this experience more generally with the 'about-to-be-retired' person.

It is a hard task for some of our personnel. It requires that they 'move over'—so to speak—in the place of affection of county people and state workers, give up some of the preferred parts of the job and watch someone else do 'their' job in a different, or even a better way. If personnel learn this task of adjustment well, they not only give over some things to the new worker, they make the way smoother for the new worker to develop and do a better job than has been done before. Some of our personnel do this exceedingly well and become excellent trainer agents. Others do this task with resentment, jealousy, and bitterness. But come it must to all personnel. Surely training can help to make the learning of this task easier and less painful.

Section V - INTERNATIONAL COOPERATION AND RELATIONS

Chapter 15

INTERNATIONAL ASSISTANCE IN EXTENSION DEVELOPMENT

International cooperation in agricultural development had its beginning with the establishment of the Institute of Agriculture in 1905. This was the forerunner of the Food and Agriculture Organization of the United Nations(FAO), the major present-day inter-governmental organization devoted to agriculture. Prior to World War II, only the more advanced countries of Europe, North America, Australia and New Zealand had agricultural extension or advisory services. Shortages of food, fiber, rubber and other strategic materials focused attention on agricultural production in less-developed countries during World War II. Following the war, food was the critical need in war-torn countries and throughout the world where population was expanding at an alarming rate. The technically advanced nations recognized a need and an obligation to assist less-advanced countries to expand food production and help the masses of rural people attain a higher level of living. They realized that peace and stability could not be achieved while large segments of the world's population were hungry. Furthermore, they realized that disparity of incomes between the people of advanced and less-advanced countries restricted trade and limited the prosperity of both. With 60 to 80 percent of the people engaged in the production of inadequate supplies of food in the backward countries, economic development required that high priority be given to modernizing agriculture.

Low agricultural productivity in the less-advanced countries stems from many causes and modernization of agriculture requires the marshalling of many resources to solve these problems. But when these resources are made available, improved production depends upon changes in farming practices of millions of primary producers. Since it is a function of agricultural extension to induce rural people to adopt improved farming practices, a part of the technical assistance effort is directed to the establishment and strengthening of extension services.

Objectives of International Assistance in Extension

The primary object of technical assistance in agricultural extension is to help nations develop and strengthen rural extension educational services thus contributing to improved levels of living in rural communities, food and fiber production to meet the needs of expanding world populations, and agricultural, economic and social development of the countries involved. It is hoped that accomplishment of this objective will strengthen democratic self-government in developing countries, relieve tensions caused by disparity of opportunity between classes and between people of different countries, and contribute to world stability and peace.

Technical assistance in extension, as extension education itself, is built on the principle of self-help. No foreign agency can establish an extension service and operate it effectively on a continuing basis. Like other institutions, the extension service must develop to fit the cultures and other environmental conditions of each country. An extension service established with foreign technical and/or economic assistance must eventually stand on its own feet and justify the expenditure of resources required for its operation through its contribution to rural economic and social progress. Technical assistance provides a country with knowledge and experience gained in the advanced countries largely through experimentation and trial and error. It is provided on the assumption that the period required for development of the service into an effective and efficient institution can thereby be shortened.

Organizations Rendering International Assistance

Economic and technical aid to agriculture has flowed from the more advanced to the developing countries mainly through 1) inter-governmental organizations; 2) bilateral programs of technical assistance; 3) private foundations, and 4) churches and other benevolent organizations and institutions.

Inter-governmental organizations providing technical and/or economic assistance include: 1/

- The Food and Agriculture Organization of the United Nations
- Inter-American Institute of Agricultural Sciences of the Organization of American States
- The Colombo Plan
- World Food Program
- World Bank Group
- Inter-American Development Bank
- European Economic Community

Bilateral programs of technical or economic assistance are conducted by some fifteen countries of Europe, North America, Australia and Japan. Israel, the Soviet Union and the Peoples' Republic of China also furnish economic aid and technical assistance to a number of countries.

Several private foundations provide assistance to agriculture, mainly in the areas of research, training and education. Among those concerned most with agricultural extension are the Ford Foundation, Rockefeller Foundation and the Near East Foundation.

Multilateral aid to agricultural development for the period 1960-66 amounted to approximately 1,385 million U.S. dollars. Bilateral assistance from the fifteen countries mentioned above in 1965 alone amounted to 1,507 million U.S. dollars. Data is not available on the amount of assistance funds devoted to the development of agricultural extension services, but in the cases of the United Kingdom's and the United States' bilateral programs, approximately 20 percent and 19 percent respectively were used in the area of agricultural education, research and extension. These were leading countries contributing to this area of development.

Multilateral Technical Assistance

Types of Assistance Rendered by FAO

Under its Regular Program, FAO's principal functions are to collect and analyse information relating to programs of nutrition, food and agriculture; to recommend and promote national and international action leading to improvement of agricultural production and marketing; and to furnish such technical assistance as governments may request 2/.

The permanent staff, in collaboration with short-term consultants, carry out agricultural research, planning and fact-finding activities, the preparation of statistics and studies, arrangement of conferences, seminars and panels. In addition, FAO administers various technical assistance programmes financed by the United Nations Development Program (UNDP) and also in collaboration with bilateral agencies such as DANIDA (Denmark), NORAD (Norway), SIDA (Sweden).

1/ Aid to Agriculture in Developing Countries, OECD, Paris 1968.

2/ Condensed from Aid to Agriculture in Developing Countries, OECD, Paris, 1968.

Much of FAO's work is concerned with education and training in specialized fields - fisheries, forestry, nutrition, home economics, etc., as well as all the aspects of general agricultural education and training. The latter is the responsibility of the Agricultural Education, Extension and Rural Youth Service which liaises with Cooperatives, Land Reform and other important institutional aspects of rural development.

There has been a marked shift in the work of FAO during recent years towards multidisciplinary and integrated development projects which seek to integrate the various inputs received by the farmer - credit, extension, farm supplies, market organization, etc.

It may not be too much of an over-simplification to say that without education and training, all forms of aid to agriculture are only stop-gaps. Fortunately, more and more governments and funding agencies are recognizing the need for training projects. The whole subject was thoroughly studied at the World Conference on Agricultural Education and Training, held in Copenhagen in 1970.1/ The report of this conference is a rich source of information on the whole field. Attention should also be drawn to the report on Rural Extension in Latin America and the Caribbean (Chiclayo, Peru, 1970).2/

FAO's current work emphasises the integration of extension and other services to farmers with the aim of closely involving the farm family and, particularly, rural youth in developing countries. Special emphasis is placed on the strengthening or establishing of farmer training centres and their close link with the extension services. Increased attention is now being given to non-formal methods of agricultural education and training and the possibilities opened up by the mass media. The following list of activities illustrates the types of assistance in extension development and operation provided member countries by FAO:

- Advising member nations on matters related to the planning, implementation and development of extension services.

- Helping to formulate and execute projects for the advancement of rural youth programs with special emphasis on the development of youth leadership and the greater involvement of youth in agricultural and rural development, and cooperating with UN and other organizations in the planning and implementation of comprehensive youth projects.

- Helping to reinforce and expand farmer training systems and to establish appropriate systems in countries not having such programmes.

- Organizing and participating in national and international training centers and conferences on agricultural extension, rural youth and farmer training.

- Participation in meetings and training courses organized by national and international organizations.

FAO recognizes the tremendous training problem involved if the millions of farm families in developing countries are to provide the increasing amounts of food and fibre required for their expanding populations. Fundamental to the development of training institutions and programs is a determination of requirements and policies for trained manpower at the professional and technical levels. FAO is assisting member countries to develop and improve the training of professional and technical personnel for extension and other rural services by the following means:

1/ FAO/Unesco/ILO World Conference on Agricultural Education and Training, Copenhagen, Denmark, July/August 1970, 2 vols. FAO, Rome

2/ Rural Extension in Latin America and the Caribbean, Report of the Technical Conference on Agricultural Extension and Rural Youth, Chiclayo, Peru, November/December 1970, 150pp FAO, Rome

- Participation in the programs of international training centers.
- Assisting member nations in the planning, preparation and implementation of comprehensive facilities for technical education and training at all levels in food and agriculture.
- Assisting in the development of curricula on food and agriculture appropriate to the differing needs of member nations.
- Promoting the production of teaching materials for agricultural education, training and extension.
- Issuing an annual review of selected developments in agricultural education and training "Training for Agriculture".
- Technical support in assisting member countries to organize national training centers for the teaching staff of farmer training centers and intermediate-level institutions of agricultural education.

Inter-American Institute of Agricultural Sciences 1/

The Inter-American Institute of Agricultural Sciences (IAIAS) is a cooperative agricultural development agency of the Americas. It is a specialized agency of the Organization of American States (OAS) founded in 1943. Its assigned objectives are to encourage and advance the development of agricultural sciences in the American Republics by strengthening institutions of higher agricultural education, research centers, and rural development services in the OAS member states. Headquarters of the Institute are at San Jose, Costa Rica, with a training and research center at Turrialba and regional(zone) offices in Guatemala City, La Molina, Peru, and Montevideo, Uruguay. Two regional research and training centers have been developed in the zones, backstopped by the Turrialba Center.

The Institute's contributions to development of extension services in the area include: 1) training of students in disciplines related to extension education; 2) assistance to Latin-American Universities in up-grading training, the establishment of graduate courses and inter-university coordination of effort; 3) research in rural and social sciences, and 4) advisory assistance in agricultural development and agrarian reform. More than 300 students have received master's degrees from the Training and Research Center. Of these, 40 percent are engaged in university teaching, 45 percent in research and 15 percent in rural development and agrarian reform. Over 14,000 professionals from the Americas have been trained at the graduate school or through international courses, national courses or in-service training, involving the Institute's staff.

The Institute has close working relations with other technical assistance agencies including contracts with the U.S. Agency for International Development, Atomic Energy Commission, and the United Nations Development Program-financed FAO projects. The Institute works with the Inter-American Committee of the Alliance for Progress (CIAP), as an advisory body.

1/ Source - International Agricultural Development, No. 39, January 1968.

The World Bank Group 1/

The International Bank for Reconstruction and Development and its affiliates have been giving increasing emphasis to the financing of projects in the agricultural field. The Bank provides technical assistance in connection with its lending operations. The Bank in cooperation with FAO and the International Coffee Council has undertaken a major study aiming to give guidance to coffee producing countries on how they might best diversify their agricultural production. A special mission organized by the Bank made a long-range study of experiences with the development of agriculture in tropical countries providing background information useful in the formation of extension and other developmental programs.

The Bank has come to the conclusion that an integrated approach is necessary for agricultural development and is now financing comprehensive agricultural programs involving land survey, demarcation and registration of individual farm holdings, farm water supplies, agricultural research, technical advice to farmers, credit extended through technical advisers, farm access roads and the provision of marketing facilities.

Inter-American Development Bank 1/

The Inter-American Development Bank is an agency created in 1959 by 19 American countries. In addition to Ordinary Capital and Special Operations funds, the Bank administers the Social Progress Trust Fund under an agreement with the United States. The Bank has become more heavily engaged in financing agricultural development in Latin America than any other development agency.

The total amount of technical assistance grants to agriculture was $14.8 million up to December 31, 1966. Much of this amount has been spent to help the implementation of projects to develop and strengthen institutions that have received loans. An additional $842.000 has been made available for training and research activities sponsored by the Bank. Six loans of $ 12.8 million in all have been made for agricultural education and training. Five of these loans went to universities to help develop the teaching of agricultural sciences. The sixth loan was for developing a national center that combines teaching, research and extension.

European Economic Community 1/

Under its first 5-year endowment of $581 million in 1958, the European Economic Community exercised only an indirect influence on agricultural development. Under its second 5-year endowment, its operations are concerned more directly with productive operations. By March 1967, commitments were made under the following categories; economic and social investment projects, technical assistance linked with investments, general technical cooperation emergency aid, aid to agricultural production and aid to agricultural diversification. Aid to agricultural production and diversification amounted to 32% of total commitments under the second fund.

Technical assistance in the agricultural field takes the form of preparatory surveys, training, supervision and direction of work as well as supply of production requisites. Agricultural extension operations are generally restricted to a limited area with comparable ecological and sociological conditions. They have been found most successful within the framework of cash crops development, much less so in areas of pure subsistence agriculture.

1/ Source - Aid to Agriculture in Developing Countries OECD Paris, 1968.

Assistance Rendered through Bi-lateral Programs of Technical Assistance

With the exception of the United States, most of the countries giving extension-related technical assistance provide it in the areas of research and training. The United Kingdom has provided large scale capital aid for the development of educational institutions ranging from agricultural colleges to farmer training centers including the training of extension workers. These institutions are located mainly in former colonies and protectorates. Although operated by the Ministries of Agriculture in the recipient countries, the United Kingdom furnishes many of the technical and administrative staff.

French technical assistance is concentrated largely in the Franc area and consists largely of assistance to the governments of former French territories. However, aid to other areas, noteably Latin America, is increasing. Research and training institutions are the recipients of much of the French technical assistance although community development projects receive support in a number of countries. 110 research and training institutions in 29 countries received help in 1966. Large numbers of nationals of cooperating countries receive sholarships for technical training in domestic institutions and in French Universities. Approximately 300 Volunteers for Progress with non-university background demonstrate modern methods of animal husbandry and production in rural communities of recipient countries.

Denmark has established demonstration and training farms in Mysore India, Thailand and Iran. Agricultural training institutes in Tanzania and Zambia help meet those countries needs for trained extension personnel. Denmark supplies experts in a number of agricultural fields and provides specialist short course training for technicians.

The Australian technical assistance program is concentrated in Asia and the South Pacific with special emphasis on agricultural research, education and extension in Papua and New Guinea. Australia provides training in agricultural fields to substantial numbers of students and technicians.

The Netherlands is developing a new scheme for the establishment of agricultural research and extension services in selected countries. She has long been a leader in providing training in tropical agriculture and supplies many experts in extension and related fields under multilateral programs of technical assistance.

Japan provides guidance and training in agricultural development at 13 Technical Cooperation Centers in India, Cambodia and Pakistan. During fiscal year 1966, 149 Japanese agricultural experts were assigned to less developed countries to carry out research and to provide agricultural training and extension services.

Belgian extension-related technical assistance activities are concentrated largely in the Congo, Burundi and Rwanda and involve mainly assistance with agricultural research and the training of students.

United States Technical Assistance Activities

United States governmental technical assistance activities in agricultural extension are administered by the Agency for International Development and carried on in cooperation with the U.S. Department of Agriculture and the Land Grant Universities. Beginning as early as 1941, AID and its predecessor agencies have assisted in establishing agricultural extension services in more than 70 countries.

Assistance has been both technical and economic. Advisers have assisted in the organization and operation of extension services. Specialists have been assigned to help develop extension work in various technical fields. Grants in aid have helped provide facilities for research, training and the conduct of extension activities. As many as 1,500 technicians and officials have received training in extension organization and methods in a single year in the United States. In addition many thousands of students have attended United States universities and technical schools on scholarships and fellowships. Their training included varying amounts of extension education.

United States technical assistance efforts for the first 20 years or so were directed mainly toward institution building; i.e. establishing an extension organization, recruiting and training staff and developing related agricultural research and teaching institutions. Development of coordinated research and teaching institutions has been carried out largely through contracts with Land Grant Universities in the United States. These institutions provided much of the participant training.

With completion of the establishment of extension services on an operating basis in most cooperating countries emphasis has been shifted from institution building to the promotion of specific agricultural production programs. Agricultural and home economics extension advisor posts have been terminated with the exception of a few countries, mainly in Asia and Africa, which got a late start and are still developing an organization.

Specific U.S. aided agricultural production programs involve greater use of technical agricultural specialists. These specialists assist governments with intensive campaigns to increase production by introducing high yielding varieties of wheat, rice, maize and other crops. Such campaigns require specialists in such technical fields as agronomy, soil fertility, pest and disease control, irrigation and farm machinery. But most important to their success is the existence in the country of established and operating extension services to carry those programs to the farmers. Without an extension organization those campaigns are unlikely to succeed. In the opinion of some officials, U.S. technical and financial support of national extension services was withdrawn too precipitously. Governments have been unable to adjust to the added technical and financial burden fast enough and their extension services have deteriorated in both effectiveness and in staff morale.

Extension Activities of Private Foundations

An advantage of technical assistance by Foundations is that they can concentrate their efforts in those areas not being attended by governmental agencies because of legal and political restrictions. As long as they conform to tax legislation governing the activities of charitable institutions they have considerable freedom in the use of their often quite large resources. Among the largest which concern themselves with agricultural and rural development are the Near East Foundation, Rockefeller Foundation and the Ford Foundation.

The Near East Foundation was a pioneer in agricultural education and extension in the countries of the Near East and Southern Europe. Its activities paved the way for present day extension services in Greece, Iran and some other countries.

The Rockefeller Foundation chartered in 1915, started with public health problems such as its initial campaign against hookworm in rural areas of Southern United States. Thereafter similar campaigns against hookworm were carried out on six continents and 29 islands in the "hookworm belt" that then girdled the globe.

In 1943 Rockefeller Foundation inaugurated another campaign in cooperation with the government of Mexico. Using the techniques of basic genetic research, Foundation scientists working with their Mexican colleagues developed varieties of corn and wheat that would grow well in Mexican soils and climate. Since 1943, Mexico has become self sufficient in corn and wheat even though its population has risen 60%. The lessons learned in the Mexican Agricultural Program have since been carried into other Latin-American countries, Asia and Africa.

Ford Foundation has concentrated largely upon social research, education and training as of concern in the development of agricultural extension. The community development programs of India, Pakistan and a number of other countries were aided materially by the training and research provided by Ford Foundation. More recently, Ford Foundation and Rockefeller Foundation have jointly established and now operate the International Rice Research Institute in the Philippines. The Institute has developed a rice variety described in Southeast Asia as the "miracle rice". This variety produces yields in tropical and sub-tropical rice producing regions, under traditional methods of cultivation of up to twice what the farmers are accustomed to.

The Institute is now concentrating on the training of extension and other specialists and technicians. It was found that these people lacked practical experience and sound technical knowledge in such areas as diagnosis of disease, identification of insects and distinguishing varieties. A two-part program was inaugurated including lectures and the actual growing of rice and all operations involved throughout the growing seasons. This program resulted in improvement of technical knowledge from around 30 percent to 90 percent, better relationships with farmers, greater knowledge of problems, and greater self confidence on the part of the technicians. As of April 1969, two classes of 30 men each, representing most countries of the region, were in training. The University at Los Baños is collaborating in the training and taking ever -increasing responsibility. An additional staff member has been added so that training consultant services may be offered to cooperating countries.

The Foundation proposes to follow up with this training approach at other centers, including the International Corn and Wheat Research Center in Mexico, the International Institute of Tropical Agriculture at Ibadan, Nigeria, and the Tropical Food, Livestock and Pasture Center in Venezuela.

The Foundation coordinates its activities closely with AID, FAO and other public and private technical assistance programs.

Chapter 16

PROGRESS IN EXTENSION DEVELOPMENT AND EXPERIENCE GAINED

Nearly all countries in the world today provide some type of educational service to help rural people improve their agricultural productivity and to raise their levels of living. Extension type services in the more advanced countries had their beginning early in the present century and in recent decades developed into powerful forces for economic and social progress. Most newly developing countries established their systems of extension education since World War II, with assistance from the more advanced countries and international agencies.

Impetus for establishment of extension type services in developing countries has come from several sources. The threat of famine has forced governments to take measures to expand food production. Social unrest among rural people has made it politically imperative to give people assistance in bettering their levels of living. Newly independent countries have found that agricultural modernization is a first step towards economic development and freedom from economic dependence upon more powerful and advanced nations. And, finally there has come a recognition that rural people, who constitute a majority of the population in most countries, have a right to equality of opportunity for advancement and a better life.

With few exceptions, extension education is administered by ministries or departments of agriculture. Exceptions include India, Pakistan and Korea in which agricultural extension is a part of broader programs of community development. Even in these instances, ministries of agriculture are usually responsible for technical support of extension in both training of staff and in field operations. In Colombia, various federations and institutes, as well as the Ministry of Agriculture, conduct extension type programs.

Another system, involving cooperation between ministries of agriculture and universities, patterned after the Land Grant College System of the United States, is being developed in some Indian states and in Ethiopia.

Extension services in developing countries are in widely varying stages of development. Latin American countries although independent republics for many years established their extension services with outside technical assistance after 1950. Many African countries have attained independent status since 1960. Prior to independence, government services were administered in the main by colonial civil servants. There were few educated nationals and very limited training facilities. Thus the newly independent nations were faced with the enormous tasks not only of organizing a government but simultaneously building such institutions as schools and universities to train personnel, research centers and the whole infra-structure required for economic development. Government policies varied as to the emphasis on agricultural development and the resources allotted to extension education. Consequently, some countries have fairly well established extension services while others are still operating on a very limited scale.

In countries where extension services operate within the Ministry of Agriculture, organizational structure varies from separately organized and staffed extension services to the assignment of extension education function to ministry technical personnel along with their other administrative, research or regulatory duties. In many countries, the extension service has a limited field staff but must depend upon technical departments of the ministry for specialist support. Often such support is not available when needed.

Efforts of development countries up to this time have been largely directed to building the infra-structure of an extension service. This has included: (1) establishing an organization, (2) recruiting and training personnel, and (3) developing educational methods and techniques appropriate to the socio-economic conditions prevailing in each country.

Development of an organization has been hindered by lack of an established civil service, instability of many governments, especially those in newly independent countries, lack of enabling legislation and lack of understanding by political bodies of the special nature and requirement of an extension service organization. Consequently, many extension services are handicapped by inadequate financial support, frequent changes in administrative leadership and fluctuation in levels of staffing.

Shortage of technically trained personnel is common to all developing countries. This problem is being solved in varying degree by (1) the concurrent development of agricultural schools, colleges and universities, (2) establishing extension training centers as in India and some other countries, and (3) supplementing the limited numbers of technically trained staff with sub-professionals who work under close supervision. In many countries the ratio of technically trained extension workers to numbers of rural families is 1 : 10,000 or more. Progress in extension education is necessarily slow in such situations.

Educational methods and operating procedures developed for use with farm families in the United States and Europe have not always been effective when applied to societies and cultures with different traditions, values and levels of education, and under different philosophies of civil government. Channels of communication are limited and changes in attitude and actions must often be motivated through appeals to different values. Research into attitudes, values and methods of inducing change is as yet meager and needs to be conducted in each society in order to improve methods of extension education.

Agricultural production has been the main thrust of extension services in developing countries up to this time with lesser emphasis on the general improvement of rural living. Even countries such as India, where the policy has been one of carrying out broad programmes of community development, has been forced to concentrate most of its efforts on food production.

"In spite of technological advances which have triggered dramatic increases in production in advanced nations, world population is increasing faster than food supplies.

> It took from the beginning of time until 1967 to reach a living world population of 3 billion people, but it will take only 33 more years for that population to become 6 billion. The earth is now adding more than a million people each week, most of them in the less developed countries.
>
> These countries already have a food deficit of 16 million tons of grain annually met by imports from the developed countries. The new mouths born in the developing areas of the world by 1980 will need an estimated 300 million additional tons of grain or its equivalent-nearly all that the United States, Canada and Western Europe combined now produce.
>
> Annual world food production barely stays the same, while population increases wildly. As a result, world-wide per capita food production in 1965-66 fell by 2 percent. In Latin America, Africa and the Far East, it fell approximately 5 percent. These are discouraging statistics.*
>
> With the cold certainty of mathematics, we are suddenly aware that by 1980 there may not be enough food anywhere in the world to placate famine's force.

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* In 1971, food production increased by 3 percent, exclusing fisheries. FAO has estimated that the number of under-nourished people in the world stands at 300 million - 500 million - little different from the estimate for the period 1957-59.

> Famine on an international scale can destroy world order and political stability. World peace becomes more precarious with increasing unrest within hungry nations. Therefore, all nations have a vital concern with preventing famine that leads to political violence .
>
> It is clear now that any stop-gap food aid for disasters or crises in these countries must be fully coordinated with long-run self-help programs.
>
> In the long run, most of the additional food will have to come from expanded food production in the hungry nations themselves.
>
> If these nations can move quickly enough, the food supply may be able to win the deadly serious race with over-population." 1/

Failure of food production to keep pace with expanding populations in developing countries has been interpreted by some people as an indication of failure of extension education as a force in agricultural development. This is like saying health services are of no value when there are only a few poorly trained doctors in a country with no hospitals, medical supplies or other health facilities. Admittedly, extension education has not yet had the impact on agricultural production expected by many of its proponents. But it must be recognized that "certain conditions must exist for the fullest agricultural development of any nation. There must be (1) markets, (2) constantly improving technology, (3) supplies and equipment locally available, (4) incentives, and (5) adequate transportation. Contributing to the strength of these conditions are the nation's degree of literacy, its communication system, and the kinds of government policies, land tenure custons, and social mores that encourage initiative." 1/ Many of these conditions are inadequate or entirely lacking in the developing countries. Although extension educational programs can help improve these conditions, they must first be provided for in the policies of the countries, with agricultural development as a national goal, and with relevant research, education and extension programs to carry them out.

It must also be borne in mind that:

> "Before village cultivators can be expected to get excited about taking up improved agricultural practices, they have to undergo some inner changes.
>
> First, they must recognize they no longer have to live as they have lived, and they must want things they don't now have. Second, they must have been made aware of the existence of better practices and of their benefits. And third, they must have seen these practices demonstrated in their villages, must have understood them, and realized they were possible to adopt.
>
> Having been taken through these steps of change, they can now be educated to see the importance, to them, of adopting improved agricultural practices. By intensive extension education, the cultivators can be taught with stronger emphasis upon carrying out the recommended improved agricultural practices. They can now be brought to see that the adoption of the improved agricultural practices will provide them the wealth they must have if they are to get the new things they now express as wants." 2/

1/ People and Food - ECOP Subcommittee on International Programs, USA, p.3.

2/ Frontiers of Change - reproduced by J. Paul Leagans, Professor of Extension Education, Cornell. For consideration of members of the Seminar: Comparative Extension Education, page 9.

Preliminary conclusions of a current study of extension service in Latim America 2/ indicate that although technical assistance agencies have aided these countries to build extension institutions, these institutions have not been used well. Productivity levels in traditional food crops have remained considerably below feasible levels. Extension staffs have not coordinated well with national food production programs. Rather, extension has gone its own way and has been limited in impact to marginal returns that accrue to strictly "educational" inputs. The extension services established with technical and financial assistance have seemed to national governments to be too expensive to carry on after financial aid was withdrawn, with the exception of one or two countries. Consequently the large non-salary component of budgets - transport and per diem of field extension workers, equipment and supplies was reduced to the point where workers were largely ineffective. Furthermore, finance ministers would not allow extension directors to reduce the number of agencies and re-deploy the savings to supplies etc.

The implication of this study is that extension generally does not have much to offer by itself. "The old technology cannot be significantly improved upon simply by rearranging factor inputs. New inputs are necessary, and these cost money. To overcome the farmer's reluctance to make cash outlays on traditional crops, extension must be able to offer either low risk credit or a high profit ratio. Subsistence farmers will need both. Extension in the Andes has operated with neither". Exceptions noted include the "catalyzer" effect of closely following a rearrangement of price/cost relations which widen profit margins.

The future of extension in Latin America may lie in serving as the vehicle for the new package campaigns. The extension services are swinging in this direction with considerable success. These packages tie fertilizer, seed, pesticides and other inputs together with new farm management techniques and a single - usually traditional-crop.

Although agricultural progress has been sluggish in the developing countries during the period they have been establishing extension services, there is no reason to condemn extension education as a force in agricultural and rural development. In fact, no country has been able to achieve maximum agricultural progress without a system for extending technical knowledge to the producer and assisting him in its application. The solution lies in improving the efficiency and effectiveness of extension services along with the development of other conditions which are essential for agricultural progress.

Trends in Extension Development

Trends in extension development in advanced and developing countries reflect differences in stages of development, different problems asosciated therewith and differing present and expected needs of their clientele. For these reasons trends in advanced and developing countries are discussed separately. What is happening in such countries as the United States, Australia and other economically advanced countries give some indication of future problems to be faced by developing countries.

Some Trends in Developing Countries

As previously stated, much effort to date has been directed toward establishing the infra-structure or organizational framework of extension services in developing countries, recruiting and training staff and learning to develop programs and methods. Accomplishment

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1/ Edward Rice, AID, Washington D.C., U.S.A.

has varied from country to country. Many services still are handicapped by shortage of qualified staff, frequent turnover in personnel, poor facilities and inadequate financial support. Nevertheless an organization does exist with considerable potential for rural and agricultural improvement. In many countries, rural people have learned that there are better and more productive methods of farming and they adopt new practices which show promise of better yields and higher income. A break with tradition is taking place which can open the door to agricultural modernization. Developments in several countries indicate that governments are beginning to take advantage of this situation.

A number of countries are focusing their efforts on one or two crops where new varieties of proven potential have been developed through research. So called Mexican wheat varieties developed in Mexico with the assistance of the Rockefeller Foundation are a notable example. Varieties were found adapted to conditions in Turkey, Pakistan, India, Tunisia and a number of other countries. With proper fertilization, irrigation and cultural practices, they produced up to three times the yields of local varieties. Ministries of Agriculture procured the seed, arranged for the fertilizer and credit to the producers. Previously established extension services were ready to launch campaigns demonstrating the new varities and related practices. They followed up the distribution of seed with educational programs on weed and insect control.

This coordinated effort of farmers and government agencies with extension playing an important role has increased wheat production in Turkey to the point where she has shifted from a wheat importing to a wheat exporting nation. Similar results had been previously achieved in Mexico and are forecast for some other countries.

The rice producing areas of Southeast Asia are focusing on the production of new high yielding dwarf rice varieties developed at the International Rice Research Institute in the Philippines. Results similar to the Mexican wheat program are being achieved in those countries as well as in Senegal in West Africa. Even while the war is underway in Vietnam, rice growers are responding to the promise offered by the new high-yielding rice varieties and are accepting the improved cultural practices advocated by extension.

The Mexican hybrid maize program developed with the assistance of the Rockefeller Foundation in 1940-50 period was a forerunner of such concerted action focused on a specific commodity. Hybrid maise promises to be in the forefront of agricultural development in Kenya and many other countries as it was earlier in the United States.

These examples are enough to illustrate a trend toward focusing the efforts of extension and other developmental agencies on specific crops and commodities.

The results of the above projects have demonstrated the necessity for closer coordination of effort among extension services, research institutions and technical services of ministries of agriculture.

However, since the contribution of research and supply agencies is more concrete and visible, some government officials seem to fail to recognize the role of extension education in the success of these projects. Consequently, some have transferred extension functions and funds to technical departments and are not providing their extension services with the resources necessary for the maintenance of a viable field organization with effective subject matter support. If this is true it is a regrettable trend.

Acute food shortages in Southeast Asia have forced concentration of resources on food production and postponement or reduction in some of other community development efforts. Some observers identify this as the beginning of a trend toward making extension the central rural educational development agency including those areas of community development programs, such as nutrition, sanitation, home improvement and community resource development, considered of highest priority by rural people. If such a trend materializes, extension concepts and programs in these countries will more closely resemble those of the Cooperative Extension Service of the United States.

Training in extension education concepts and methods had to be obtained abroad in the early stages of development in many countries. With inauguration of extension education courses in local training institutions and the establishment of extension training centres often with the assistance of international organizations, foreign participant training has fallen off. This policy allows more personnel to be trained at less cost with training better adapted to local needs.

Some Trends in Economically Advanced Countries

Trends in extension development in the more advanced countries are responses to a number of factors and forces. These include: (1) natural evolution of a dynamic service to meet ever changing needs; (2) economic forces which are changing farming practices and rural living; and (3) social forces which demand attention.

The evolution of extension services under enlightened leadership is illustrated by developments in Australia since 1962. That year marked the first Australian university teaching appointment in agricultural extension at the University of Queensland. As of 1969, nine of thirteen universities provide degree courses in agriculture and seven of these now have at least some formal courses in agricultural extension at the under-graduate and/or graduate levels. Extension research was also being undertaken. About 40 graduate extension workers with considerable field experience had completed the post-graduate diploma in agricultural extension at Melbourne or Queensland Universities with significant effect on the state extension services.

> Farm management extension has had very considerable accent and a relatively large number of graduates (about 150) are in private practice or farmer group employment as management consultants or advisers. Commercial organizations have also recruited a lot of experienced graduates and diplomates from the state services, so the latter have their staffing problems.
>
> The Commonwealth has considerably expanded its financial support for the state extension services on the basis of approved project or programme support, rather than "untagged" grants-in-aid. To administer the expanded Commonwealth extension services Grant, to be responsible for the Commonwealth's interest in agricultural extension, and, less publicized, to provide a national professional leadership group,the Extension Services Division was formed within the (Commonwealth) Department of Primary Industry. 1/

European agricultural advisory services are placing increased emphasis on marketing and farm management as well as farm mechanization. This is a natural response to the competitive situation in agriculture arising from development of the European Common Market.

In 1966, the National Association of State Universities and Land Grant Colleges (NASULGC) and the United States Department of Agriculture, conducted a national study of the cooperative extension service at the request of the Extension Committee on Organization and Policy (ECOP). A high level committee collected information from state extension services, universities, agricultural industries, rural leaders and the general public. The joint committee report 2/ analyzes current activities of the Cooperative Extension Service and develops the Committee's recommendations for the future. Although implementation of the recommendation will depend upon national and state legislation as well as the 51 State Extension Services and the Federal Extension Service, the report summarizes the opinions of many people on the direction extension should go over a 10 year period.

1/ R.N. Farquhar - Extension Service Division, Department of Primary Industry, Canberra. Personal correspondence with the author.

2/ A People and a Spirit - A report of the joint USDA - NASULGC Extension Study Committee, USDA, Washington, D.C. 95 pages.

The joint committee analyzed current activities of the Cooperative Extension Service and projected changes in extension manpower allocations for the nation in various program areas over a period of 10 years. Program areas were classified under four general headings: (1) Agriculture and Related Industries, (2) Social and Economic Development, (3) Quality of Living, and some indications as to trends in extension programs in the United States.

The basic thrust of recommendations contained in this report calls for the Cooperative Extension Service to adapt its staff and program effort to serve more adequately the broad range of social and economic problems of the nation while strengthening its assistance to the agricultural sector of the economy. Another basic recommendation calls for Cooperative Extension Service to stand ready for an organized, active, and significant role in technical assistance and development programs of the less developed nations of the world.

The efforts already made by Cooperative Extension Service to improve the effectiveness of its programs should be acknowledged. In recent years, there has been a marked improvement in the professional qualifications of specialists. Many area or multi-county specialized agents have been assigned. Efforts have been increased in adaptive research, and increasing attention is being directed toward educational programs which relate agricultural production enterprises to the total sales and distribution system of the nation.

The role of the extension agent has increasingly involved a commitment to the community and those groups active within the community. Developmental programs have been added which deal with a broad range of social and economic factors. Family and youth programs have become increasingly effective in the urban environment. New arrangements with agencies and local organizations have emerged. Increasing emphasis has been given to staff training and development and considerable progress has been made in the level of formal training possessed by extension personnel.

The Joint Study Committee recommends that the Cooperative Extension Service seek maximum effectiveness from its manpower resources by:

- Employing more specialized area agents.

- Upgrading the professional competence of personnel.

- Increasing use of specialists holding joint research, teaching, and extension appointments.

- Experimenting with new organizational structures such as multi-county staffing and specialist teams.

- Employing personnel trained in disciplines relevant to the assigned educational role.

- Increasing the use of consulting teams on a contract basis for special problems.

- Increasing the use of non-Extension personnel hired for specific work on a part-time, one-time, or periodic basis for help in disciplines not available on the regular staff.

- Making the best use of available staff by utilizing new electronic teaching devices, new communications systems, and new teaching techniques.

Agriculture and Related Industries - National goals related to economic growth, technological change, and to agriculture demand that Cooperative Extension maintain an effective program in agriculture and its related industries. The Joint Study Committee recommends that the Cooperative Extension Service:

- Increase program emphasis in marketing and farm business management.
- Reduce the relative percentage of effort in husbandry and production programs.
- Take advantage of the capabilities of commercial agricultural firms to provide a part of the technological information.

Social and Economic Development

- Expand efforts in educational programs of social and economic development.
- Make significantly greater efforts to assist low-income farmers in decisions other than agricultural production, including selection of alternative vocations.
- Expand program activity dealing with natural resources and the environment.
- Build upon extension strengths in rural areas, but also increase the commitment to the central city in the years ahead.

Quality of Living

- Expand extension programs of youth and family education.
- Expand sharply the educational programs to help the disadvantaged and the alienated.
- Emphasize the disciplines of social and behavioral sciences as well as those of home economics in filling positions to support future programs related to the family.
- Assign personnel to work in extension youth programs who are qualified in disciplines relevant to the education and motivation of youth.
- Adapt and expand 4-H as well as provide additional youth educational activities where 4-H is not a suitable mechanism for meeting specific problems.
- Undertake continuing national as well as state dialogue with leaders of cooperating organizations, to seek ways by which each organization can assist in meeting the merging broad human development problems.

International Extension

- Evolve long-range program strategy for the U.S. overseas agricultural development programs. The strategy should provide for a formally planned and specifically financed extension component and define the nature of relationships under which such long-term programs will function.
- Make efforts to adapt existing U.S. institutions, including Cooperative Extension Service, to long-range overseas programs of agricultural development.
- Direct major initial emphasis in extension programs abroad toward increased agricultural production and marketing.
- Develop cooperative extension field support for approved agricultural development activities sponsored by private industry in other nations.
- Establish international extension training centres at one or more Land Grant Universities. 1/

Areas of Extension Needing Strengthening

Legislation establishing the extension service as a permanent institution is a basic need in many countries. Until passage of the Smith-Lever Act by the Congress of the United States in 1914, the U.S. Department of Agriculture, State Departments of Agriculture, Colleges of Agriculture, farmers associations and other groups attempted to conduct unrelated and often isolated extension activities. Legislation brought extension activities together in one organization and provided a sound basis for coordinated efforts in agricultural teaching, research and extension. Many developing countries and some more advanced countries have failed thus far to centralize extension-type functions in a single adequately staffed and financed institution with its responsibilities and scope of operations well defined. Such national legislation provides a legal framework for coordinating the essential elements of agricultural and rural development and, if integrated with a national civil service, provides a degree of permanence and security which reduces staff turnover and improves continuity of extension programs.

Adequate financing is a second basic need of all extension services. Finance ministers must recognize that extension programs require intimate contact with masses of rural people. This means not only large numbers of adequately trained field, supervisory and technical support staff but transport, supplies and equipment. Where finances are limited, it is better to maintain fewer adequately financed local agencies, with emphasis on work through farmer committees and rural leaders, than to employ larger numbers of personnel with no means of contacting the farmers and carrying on their educational activities. Some countries in Latin America have felt unable to continue their extension service at former levels when foreign technical and financial support was withdrawn. Budget support programs through the use of P.L. 480 funds (local currency paid for U.S. agricultural commodities under concessional sales agreement) are helping to remedy this situation in some instances. Salaries for extension workers comparable to those in competing agencies and industries will enable extension services to retain competent personnel and justify more emphasis on staff development.

The organization of extension services can be greatly strengthened in most countries through the greater use of technical subject matter specialists under the administrative control of the extension director. They are needed not only to provide technical support for often inadequately trained field personnel but to develop impact programs in their respective fields and to strengthen coordination with agricultural research and the programs of related technical departments.

1/ A People and a Spirit - A Report of the joint USDA-NASULGC Extension Study Committee, USDA, Washington D.C. 95 pages.

The advanced countries as well as the developing countries feel the need for more effective specialist support. Agricultural specialization has progressed so far and problems of production, marketing, management and allocation of resources have become so involved that local extension agents need more and better trained specialists, available on an area basis.

Use of many young and inexperienced extension workers having minimum training and often lacking rural background, demands close supervision and guidance. This is another area requiring strengthening in many countries.

Extension work with rural women and youth is barely getting started in most countries. In view of the influence of the mother, not only upon the health and welfare of the family but upon agricultural production, this is an area of extension work that countries cannot afford to neglect.

Farm youth must be taught the advantages as well as the methods of modern agriculture if future leadership is to be available for continuing rural progress. The attitudes and values developed among young people today will profoundly influence the development of rural communities in the future.

Improvement in Training at all levels is a continuing need in all countries. The need is most apparent in countries with newly established extension services which are recruiting and training new staff. But the need for upgrading of personnel and improving their ability to serve fast changing needs of an expanding clientele is just as important in the old established services. In both developing and advanced countries ability to organize people for cooperation on common problems, and an aptitude for working with representatives of other development agencies and institutions is becoming increasingly necessary. Few extension workers have sufficient understanding of group dynamics, and knowledge concerning the social and psychological principles involved. Farm and home management, marketing and processing and wise use of credit are other areas needing understanding by all present day extension workers. Fundamental to improvement in training is the establishment of a training policy in each country. This involves setting training goals, developing facilities, adequate financing, assignment of responsibility for training activities and periodic review of progress.

Definite improvement is needed in extension programs. It is not enough to ask people what are their problems and base the program on those problems, although an understanding of people's wants and needs is fundamental to effective extension education. The extension worker, as an educational leader needs to discover, and help his people discover, opportunities for greater agricultural productivity, higher incomes and better living. A much more positive approach is needed than has been displayed in the past. When opportunities have been discovered, often with the help of specialists, those should be selected for concentrated effort which offer the greatest possibility of accomplishment and satisfaction to the people. Their council is important in deciding on projects they are ready to carry out and in setting of goals. Because of their knowledge of local conditions, their competence in organizing for community action and their training in educational and information methods, extension personnel should be actively involved in developing and carrying out national and regional production programs.

Coordination of extension programs with agricultural research, credit, cooperatives and developmental programs of technical departments is an acute need in many countries. The advantages of such coordination have been demonstrated in the Mexican wheat introduction program in Turkey, the rice improvement program in Southeast Asia, the service systems in some Latin American countries such as Peru and in other areas. As developed under

Extension Organization in Chapter 3, no one institution working alone can assure agricultural and rural progress. Neither can many institutions working independently and in competition. But working in unison, progress is almost assured.

Resources Required for Extension Development

Agricultural extension services require several kinds of resources for the establishment and continuing effective operation. They include: (1) human resources of trained and dedicated personnel, (2) physical resources and facilities including supplies and equipment with which to work; (3) technical resources, scientific knowledge adapted to use in agricultural and rural development; (4) financial resources to assure continuity of operation, and growth to meet increasing needs of rural people; (5) political and administrative support; and (6) an institutional environment conducive to rural development and agricultural progress.

Human Resources

An extension service is primarily people. Their attitudes and behaviour determine the effectiveness of the organization. It is important to have enough personnel to organize and conduct programs reaching all members of the rural community. But this may not be possible for services in early stages of development or where funds are limited. Quality of personnel is more important. And quality is achieved through careful selection and training. Technical trained personnel are simply not available in sufficient numbers to staff all public and private developmental institutions and agencies in many countries. Therefore the development of schools and colleges must proceed concurrently with the development of extension and other services. Extension cannot approach its potential until such institutions have operated effectively for a number of years.

Organized programs of staff development are essential to new and long established services alike. Services in developing countries must make up for inadequate pre-service training. The Joint-Study Committee in the United States recommended that "the present extension staffing for staff training be doubled..... Extension must do for itself what it seeks to do for other organizations; namely, improve organizational efficiency and staff competency."

Physical Resources

Lack of transport, demonstration and teaching equipment, supplies and facilities with which to work can make an extension worker almost entirely ineffective. His work being with people he must be able to contact them on their farms and in their homes. Without transportation contacts are limited to those who come to see him and the few who live within walking distance. Demonstration and teaching equipment are the tools of his profession. Few people learn new practices only from the spoken word. They must be shown how as well as told. Supplies of improved seed for demonstrations, samples of material used in sewing, efficient equipment for demonstrating the use of fertilizers and insecticides are equally important, always bearing in mind that equipment used in demonstrations should also be available to farmers and farm women who are expected to follow recommended practice. These things seem so obvious it should not be necessary to repeat them but extension workers in nearly every country are handicapped by lack of the physical resources necessary for effective work. In many cases it would be better to reduce staff and use the savings in salary to provide adequate transport and equipment for the remainder.

Technical Resources

Technical information in agriculture and home economics is the main commodity the extension worker has to dispense. All extension workers are presumed to have basic technical training before assignment. But the adequacy of such training varies and may be more theoretical than practical. Furthermore, the volume of technology is increasing at an accelerated rate and is said to double every eight years.

Field extension workers must have a readily available source of technical information in a form applicable in solving problems of agricultural production and rural living. Applied or adaptive research provides the technical information required by the field extension worker in developing and executing his program.

The statement has often been made that "you can't have an extension service until you have technical information to extend." Although few farmers, even in highly developed agriculture, apply all of the available information, there is an element of truth in this statement. New crop varieties providing dramatic increases in yield, or use of a new and highly effective insecticide are easy to "extend" because the dramatic results can be demonstrated. But management practices which reduce costs and increase profits, and improved sanitation which reduces disease are equally important and acceptable to rural people when well understood.

Financial Resources

Adequate funds with which to operate an extension service is the most commonly expressed need of extension administrators. An extension service requires more funds than some other government agencies because of the large number of personnel required, as well as transport, supplies and equipment. Since the effectiveness of extension education depends so much on the energy and initiative of the staff, high morale is especially important. Underpaid and ill-equipped personnel are unlikely to display much enthusiasm in their work. Shortage of funds to finance government services is common to nearly all developing countries. Generally, extension services are expected to operate within budgets and salary scales set for all government services, often without regard to the special aptitudes, abilities and technical competence required for effective extension work. Consequently, extension services lose their best qualified staff members to private industry or institutions not subject to government salary scales. Technical assistance agencies have sometimes attempted to up-grade staff by supplementing their salaries or providing other fringe benefits. This works as long as such financial assistance is available. But when assistance is withdrawn, salaries may be reduced with lowered morale and loss of staff as a result. The only permanent solution appears to be a budget policy which takes into account the essentiality of extension services and a salary scale which give due allowance to staff qualifications and excellence of performance.

Political and Administrative Support

Although extension personnel must refrain from partisan political activities and serve all rural people regardless of political affiliation, support by the current political administration is essential. One country established an entirely independent extension service unaffiliated with any government ministry. Soon it found itself without support in its efforts to obtain appropriations and in disfavor with the technical departments of the ministry of agriculture. Extension needs administrative support of both budget and program. It must conduct itself in such a manner that each succeeding administration recognizes its value and gives it the necessary support.

Rural Institutional Environment

An extension service working alone can do little to raise the productivity and level of living of rural people. A land tenure system that assures the producer his rightful share of benefits from improved practices; markets at fair prices; sources of agricultural seeds, supplies and equipment, credit at reasonable rates; roads and transportation; research and experiment stations; schools and medical services all are required for rural progress. Absence or ineffectiveness of any of these institutions and services reduces the efficiency of the others including extension.

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